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# CLINICAL MEDICINE AND SURGERY

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VOLUME 42 April, 1935 NUMBER 4

## LEADING ARTICLES

| | PAGE |
|---|---|
| Ionization in Hay Fever | 159 |
| Bichloracetic Acid in Skin Lesions | 162 |
| Gelatin in Medicine | 165 |
| Spontaneous Disappearance of Flat Warts | 169 |
| Doctor in War | 170 |
| Zinc Chloride in Breast Cancer | 173 |
| Adrenal System and Infections | 176 |
| Chronic Ulcerative Colitis | 184 |
| Dog Breeding as a Hobby | 188 |
| Editorials | 155 |

• COMPLETE TABLE OF CONTENTS ON ADVERTISING PAGE FOUR •

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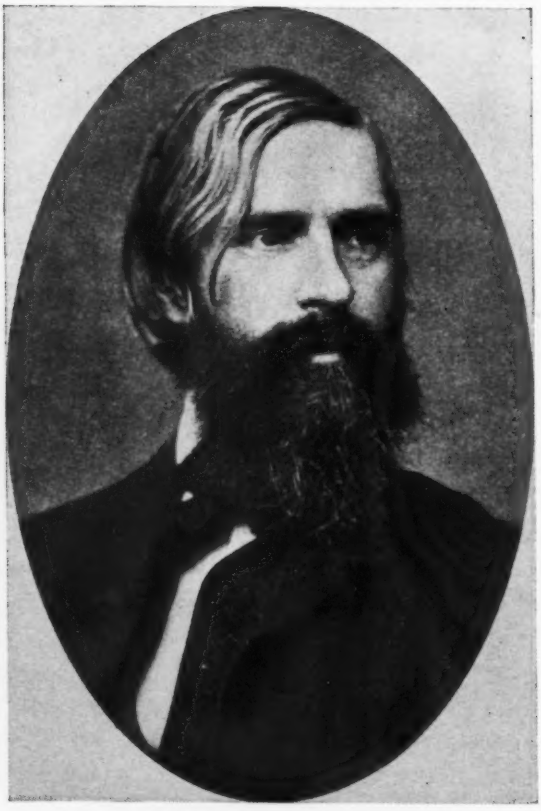

ALBRECHT VON GRAEFE

# CLINICAL MEDICINE AND SURGERY

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VOL. 42 APRIL, 1935 NO. 4


# EDITORIAL

## Albrecht von Graefe

### Creator of Modern Eye Surgery

IT is difficult for us to imagine how it was possible to perform delicate operations on the eye before cocaine was available for topical anesthesia, but we have reason to believe that such work was done in Egypt, four or five thousand years ago, and it is certain that the greatest of all eye surgeons carried out such maneuvers with astonishing success more than twenty years before Anrep introduced that remarkable drug to the medical profession, in 1879.

Albrecht von Graefe was born in Berlin, Germany, in 1828, and was graduated in medicine from the University of Berlin in 1847. Arlt, of Prague, seeing his possibilities, urged him to take up ophthalmology as a specialty, and after studying with Sichel and Desmarres in Paris, the Jaegers in Vienna, and Bowman and Critchett in London, he began to practice in his native city, in the private hospital for eye diseases which he founded in 1850, with such success that he was made professor of ophthalmology at the University in 1857, at the remarkably early age of 29 years.

In 1854 he founded the *Archiv fur Ophthalmologie*, in which periodical most of his discoveries and inventions were first published, and which remains, to this day, the most important journal in its field. In the first volume alone appeared his monographs on disorders of the oblique eye muscles, the nature of glaucoma, keratoconus, mydriasis, diphtheritic conjunctivitis, and double vision after strabismus operations.

In addition to these contributions, he introduced iridectomy in the treatment of iritis and glaucoma; made the operation for strabismus rational; improved the operation for cataract and invented the knife for its performance which still bears his name, so that the loss of eyes fell, in his hands, from 10 to 2.3 percent; described and explained progressive ophthalmoplegia (Graefe's disease); used the ophthalmoscope with extraordinary success for studying functional amblyopias; described sympathetic ophthalmia and the symptomatology of ocular paralyses; and was the first to note the lagging of the upper eyelid when the eye is turned up or down, in cases of exophthalmic goiter (Graefe's sign). It is easy to see why he is called the greatest of ophthalmologists.

Graefe's clinic became famous all over the world, and practicing physicians came from every civilized country to study under the master of eye surgery. Nearly all of the greater ophthalmologists of the nineteenth century, including Forster, Lieberich, Pagenstecher, Jacobson and Horner, were among his pupils.

Dr. Graefe was a highly refined and sensitive man, and it is not hard to understand how the enormous and necessarily meticulous labors he undertook, along with his teaching, wore out the delicate machinery of his physi-

cal and psychic organism, even though he retained his boyish spirit of prankish joking throughout his deplorably short life, which came to a close in 1870, when he was only forty-two years old.

This outstanding German surgeon was an example of those geniuses and artists in the wide fields of medical practice, only a few of whom are born in any generation. His living and growing monument is built of the grateful thousands of those who owe the blessing of sight to the wisdom and skill of this great founder of modern ophthalmology.

I look on solemnity as a disease. I had rather a thousand times be feeble and feverish than think lugubriously.—VOLTAIRE.

## Preparation of Manuscript

IF manuscript is prepared in accordance with the following rules, it simplifies the editorial and printing work:

1.—Typewrite the text on letter-size (8½ x 11 inch) white paper, without tables or cuts. Use double space between lines for *all parts of the manuscript*, and a margin of one inch or more on both sides, so as to allow for editorial corrections. Insert superior characters for bibliographic references (using serial numbers without regard to pages) and asteriks, daggers and other conventional figures for footnote references. Put footnotes on the same page as the reference to which they belong. Do not send a carbon copy of anything.

2.—Put tables in a section by themselves, arranging them in serial order, using Roman numerals for numbering them.

In the bibliographic references, do not use italics except for abbreviated names of journals, and use capitals in titles for the principal words. Use only accepted abbreviations for journals. In case of doubt, look in this or some other standard journal for the proper abbreviation. Put the bibliography on a separate sheet or sheets, *double spaced*. Give both date and volume number of journals; and date, publisher and place of publication of books, where possible. Titles of books should be placed in quotation marks. The forms given below should be followed:

Brown, A. Crum: On the Semicircular Canals of the Internal Ear. *Proc. Roy. Soc.*, Edinb., 8:370-371, 1874.

Metchnikoff, Elie: "The Nature of Man." 1909, G. P. Putnam's Sons, New York, p. 309.

3.—Legends for figures or pictures should be put on a separate sheet or sheets, arranged in their serial order. Use Arabic numerals for numbering illustrations.

The drawings or plates for figures should be numbered to correspond to the legends. These numbers should be placed in the corners, on the back or far enough out in the margin so as not to appear in the cut itself. These numbers are solely for identification in the proofs.

4.—Before submitting a manuscript to an editor, read it *carefully* for typist's errors, inconsistencies in grammatical construction, paragraphing and capitalization. Use no abbreviations in the text. Make necessary corrections *legibly*, in pencil. This will help greatly in eliminating errors and reducing author's alterations on the proofs, which are *not* intended for rewriting the article.

5.—If authors use the accepted proofreaders symbols in making changes in manuscript, or corrections in proof, misunderstanding is avoided; but this is not absolutely essential, if the corrections are entirely legible.

Work is necessary to all joy when a man reaches maturity.—W. G. SIBLEY.

## Sex Questions

IT seems highly probable that there has never been a time (at least during the past several hundred years) when matters of sex have been as freely discussed as they are today; and there has certainly never been a time when such discussions have been prompted by as high a degree of serious and intelligent interest as now lies behind them.

The tragedy of the situation lies in the fact that so few parents, teachers and, especially, physicians, are able to satisfy the genuine and eager desire in the minds of questioners along these lines, by giving sound and well-informed answers.

One of the most important duties of medical men is to act as educators of the public in all matters pertaining to health; and there are few, if any, such matters which have such large potentialities for upsetting the psychic stability of people in general as ignorance and maladjustment of their sex lives.

Here and there one finds a physician who has given this subject earnest thought and is doing splendid work in enlightening those with whom he comes in contact. One such is Dr. G. P. Lawrence, who, in the issue of "C.M.&S." for September, 1932 (page 654), set forth a brief account of what he is doing and included a number of questions which had been asked him in his classes.

At the time this article was published, we told Dr. Lawrence that we believed that a highly useful purpose would be served by writing out his answers to these questions,

for publication, so that other physicians might have the benefit of his suggestions when they are called upon, by their patients and friends, to answer similar questions.

The manuscript of such a paper is now in our hands, but it is, necessarily, so long that we shall have to publish it as a serial (probably in four parts), and we are announcing it at this time in order that our readers may be watching for it, because we believe that it contains information which every physician ought to have, and which cannot be obtained elsewhere in such compact and readable form. The first installment will probably appear in May.

We hope that our readers will give this article serious consideration and will send in, for publication, any comments or suggestions which they feel will make sex instruction more sound and readily available to the general public.

We cannot resist the inference that, in personal intuition, we have an insight into depths of truth unplumbed by science.—WALTER GRIERSON.

## The Purposes of Retrospection

WHEN one really gets a glimpse into the lives of other people (as physicians frequently do), it is surprising to find how many of the older ones are living chiefly in the past —trying to keep their souls from dehydration with the water which has gone over the dam or seeming to derive some unwholesome satisfaction from remasticating the bitter morsels of experience which have been reluctantly chewed in days gone by.

Upon consideration, there appear to be two valid purposes of retrospection: instruction and pleasure.

If we have made a conspicuous success or failure of any particular undertaking, it is a valuable exercise to consider, in detail, the conduct, emotional reactions and thoughts which led up to the favorable or unfavorable outcome, so that we can repeat the series of events, in the former instance, or avoid it in the latter. When this lesson has been extracted from the materials of experience, we should let go of the rubbish which we have sucked dry in the process, and permit it to drift away down the stream of time, retaining only the juice, for our souls' nourishment.

There are times, in the lives of everyone, when the momently present circumstances of life are sapless, tasteless or even disastrous. Such sterile or distressing periods can be sweetened and enriched by recalling those high, white hours of the past when we have been gloriously in tune with our universe.

But continually to draggle the robes of the spirit in the "sobs and slobber of a last-year's woe" seems about the most depressing and profitless waste of time which can readily be brought to mind.

Here is where *prespection* comes in. If, standing upon the high peaks of our past, we can visualize, in detail, the contours of a worthy and satisfying future, the cloud of worry which obscures the sun of so many lives can be driven away, and we shall enter into the "promised land" of which we have dreamed.

The sooner one gets rid of the false idea that mind and corporeal body are separate in their functionings, the sooner that one will have started on a scientific mental unfoldment.—DR. A. B. JAMISON.

## Vitamin A

A SUFFICIENT number of reports of the value of vitamin A in increasing body resistance have been published, to make thoughtful physicians refuse to accept, at their face value, other reports which are intended to show that an increase in the supply of this vitamin has a negligible effect in preventing colds and other respiratory maladies, and thus to arouse a doubt as to its value as a resistance builder.

The only way in which vitamin A is related to infections is through its generally recognized power to promote the integrity of epithelial structures, wherever found, and thus to make them more resistant to the entrance of bacteria, especially the pus-formers.

We must remember that colds and influenza have been listed among the diseases due to filterable viruses, and if that is a true statement, we are not dealing with bacteria, as we ordinarily find them, but with an ultramicroscopic agent which *may* act quite differently. Therefore, a substance which might increase resistance to bacteria, might not protect against these viruses.

Another factor to be considered is that not all of the many preparations of vitamin A now on the market are equally potent. We would need to know *exactly what product* was used in these negative experiments.

A third bit of food for thought is that a number of the "authorities" who report adversely regarding therapeutic resources which are giving satisfaction to hundreds of intelligent physicians and their patients, appear to be far more keenly interested in animal experiments and in proving that others are wrong than they are in establishing the true

and worthy place of these resources in our armamentarium for the treatment of human beings.

The mass of evidence showing that the administration of products containing large quantities of vitamin A has actually reduced the incidence of colds and other respiratory disorders, in thousands of individuals, is too impressive to warrant us in accepting a few statements to the contrary, no matter what their source may be. Those who have had ample clinical experience, *know* what remedies are valuable, without being told by anyone.

The irradiation of milk supplies, in some of the larger cities, has been rather widely practiced of late, to increase the supply of Vitamin D. May it not be that this procedure has some not-yet-ascertained unfavorable effect upon the supply of vitamin A?

While a number of these matters remain subject to discussion and research, those physicians who are convinced that, by prescribing remedies containing vitamin A, they have protected their patients from many attacks of respiratory and other infections, will probably (and properly!) go right on prescribing these remedies and will not be unduly perturbed by derogatory reports, even though these may be sponsored by persons in high places.

**NEXT MONTH**

**Dr. John A. Kolmer, of Philadelphia, who has been so helpful to our readers in the past, will explain, in his usual terse style, the basic facts of "Septicemia."**

**Dr. William Lintz, of Brooklyn, who has given valuable hints on high blood pressure in these pages, will give some more "Suggestions in Hyperpiesis."**

**Dr. Guy van Scoyoc, of Los Angeles, will explain, in a logical way, the "Action and Uses of Calcium Salts."**

**COMING SOON**

**"A Rapid Method of Making Tests for McDonagh Diagnosis," by Dr. Fred D. La Rochelle, Springfield, Massachusetts.**

**"Dangers of Mouth Props and Mouth Gags," by Dr. Fred D. Miller, Altoona, Pennsylvania.**

## Information

IN connection with practical clinical articles appearing in this or any other medical journal, the names of certain drugs, pharmaceutical specialties or pieces of apparatus are frequently mentioned; but it is not the general custom to include, in the body of such articles, the name and address of the company which manufactures these things.

It frequently (though by no means always) happens that the manufacturers of items mentioned in articles are announcing their products in the advertising pages of the journals, and a careful search of these pages will often give the readers such information as they desire.

It is, however, our consistent practice, whenever any specific drug or appliance is mentioned in the text of any article we accept for publication, to ascertain immediately where such items can be obtained, in order that we may be able to give prompt and intelligent answers to any letters of inquiry we may receive regarding them, and also to enable us to be sure that the items mentioned are, in all human probalility, reliable and such as we can personally recommend.

# LEADING ARTICLES

## The Place of Ionization in the Treatment of Hay Fever

By Burton Haseltine, M.D., F.A.C.S., Chicago

WITH the approach of another hay fever season, there is naturally a revival of interest in the subject of nasal ionization, which received so much attention last year. Frequent discussions are appearing, some controversial, some reporting experience, some obviously without it, and too many, I think, betraying a lack of the fundamental knowledge of the subject that is now available. I do not mean merely knowledge of the technic of ionization, which is now easily acquired. In the papers of Franklin[1], Warwick[2], Alden[3] and Hays[4], and in my own paper[5], which was admirably abstracted in CLINICAL MEDICINE AND SURGERY for August, 1934, the technic is described in minute detail.

But the finest rhinologic technic alone, does not qualify one to employ this procedure with either success or safety. The symptoms which it is intended to prevent or to cure are only a minor part of the complex asthma-hay fever syndrome. A thorough knowledge of this syndrome, especially of its causative factors, is essential to the successful treatment of any of its manifestations. Any treatment, directed to one single manifestation and in disregard of basic causes, is generally futile and sometimes dangerous.

It has been established, both clinically and in the experimental laboratory, that the basic etiologic factor underlying the asthma-hay fever syndrome is a departure from normal general health, best described as a toxicosis or a toxic state. This condition is readily diagnosed, both by clinical signs and by definite biochemical findings. This general toxic state may produce any or all of the symptoms of the syndrome except the single symptom of bronchospasm. For the production of this symptom an irritation to the respiratory nervous mechanism must be added.

It is a knowledge of these facts which has enabled us to understand the relationship between hay fever and bronchospasm. That a close relationship exists has long been observed, but the exact nature of it has only in recent years been clearly defined[6].

### Hay Fever and Bronchospasm

The symptoms known as hay fever and hyperesthetic rhinitis, seasonal or nonseasonal, are local manifestations of the underlying constitutional disturbance and result only from contact with some of the substances to which the individual is sensitive. They are in no sense spastic phenomena and no nerve conduction paths are concerned in their production. The typical hay fever reaction may occur on any mucous membrane, just as it occurs on the skin where the sensitive layers are exposed to the specific excitant, as in the socalled sensitization tests. The overwhelming predominance of the nasal symptoms is due to two entirely accidental factors: First, the offending material, being usually air-borne, reaches the respiratory tract in greatest abundance; second, the nasal tissues, because of their peculiar structure, react more violently to any irritation than do most other tissues. The condition essential to the production of hay fever, then, is a bodily state not depending upon abnormality in any one organ. A patient in this condition, exposed to suitable irritants, may have an attack of hay fever, *with a previously normal nose.*

Bronchospasm is not a local tissue reaction, but is an exaggeration of a normal physiologic reflex involving certain conduction paths of the central nervous system. Obviously, then, in the absence of other vagus irritation, a patient *cannot have bronchospasm with a previously normal nose.*

We have, therefore, the explanation of the peculiar sequential relationship between hay fever and asthma, so commonly observed and so little understood. Everyone knows that the chronic hay fever patient later becomes asthmatic almost without exception, usually passing through a period of "hay asthma" and ending as a chronic asthmatic, with perhaps seasonal aggravations. With about equal frequency are found asthmatics without a preceding hay fever; while the patient who first shows hay fever after long periods of bronchospasm is rare indeed.

A patient may have bronchospasm all his life without developing the tissue sensitization necessary to produce hay fever. But, a patient cannot have repeated attacks of hay fever without developing the nasal abnormalities necessary to produce asthma. The

basic toxicosis he already has. He needs only the nasal damage inflicted by these repeated ordeals, to provide the other factor and, as this increases, he passes through the "hay asthma" stage into that of the fully developed asthma type.

It is a striking fact that there is a close correspondence between variations in the basic toxic condition and the clinical manifestations. Not only is this true as regards severity of symptoms, but also as to which symptoms predominate.

For instance, there is commonly, in these cases, a disturbance of the normal acid-alkaline balance, and this may be a deviation either way from normal. In the hay fever case, however, it is the common observation of our group, that this deviation is always toward the acid side, and before we knew of better methods it was our custom to alkalinize these patients, which did produce a lessening in the severity of their reactions. Since we have known that the diminished alkali reserve is the result of toxicosis and have used proper corrective measures, we have had no need for the administration of alkalies.

It must not be understood from our insistence upon attention to the basic factors that any general treatment will completely do away with nasal reaction to air-borne irritants. Of all the symptoms of the syndrome, this is the one least amenable to general measures. Food sensitizations are nearly all curable by general treatment; skin manifestations largely yield to detoxication; and bronchospasm is greatly ameliorated; but no treatment, whether de-toxicative or in-toxicative, has yet enabled the hay fever patient to stand up under our annual load of pollens without some local protection against them.

### Changes in Mucous Membranes

And this, in my opinion, is what ionization provides. It produces a change in the mucosa to which it is applied, which apparently renders it less permeable to pollens and all similar excitants, with the result that the reaction to these substances is greatly lessened. This view is supported by three observations: (1) The microscopic sections of the tissue, long after ionization, show changes which suggest that the mucosa is less permeable; (2) untreated areas in the same individual show reactions apparently unchanged; (3) The treated areas in some cases, after prolonged exposure to atmosphere with extremely high pollen content, show diminished but typical reaction.

I would reiterate and emphasize the opinion that it is an error to suppose that this treatment has any beneficial effect upon the basic systemic condition. Likewise the belief of some observers that it has a harmful effect is equally erroneous. This belief results from the fact that a few cases have gone into severe bronchospasm following ionization, which, with our present knowledge, is explained in another way. This has occurred twice in our experience and both were frankly unsuitable cases, treated in response to urgent requests, without proper study or preparation. In all others of which we have detailed information, similar errors were made. It must be remembered that every hay fever patient is a candidate for bronchospasm even if the history shows no record of a recognized attack. To subject such a patient, without study or preparation, to a procedure involving a profound local reaction is obviously foolish and possibly dangerous.

Another consideration, not, I think, heretofore mentioned, must not be overlooked in this connection. We regard the hay fever symptoms (swelling, hypersecretion, etc.) as, to some extent, a protective reaction. These patients are systemically, as well as locally, hypersensitive and these air-borne irritants are, to them, constitutional as well as local poisons. So true is this that when the dose is overwhelming they are often thrown into a condition resembling anaphylactic shock.

Now the first reaction renders the nose a more effective filter and, to some extent, lessens the load of toxic material carried by inspiration to the deeper structures. If the load continues, this defence in time gives way and the result is shown by general symptoms, including bronchospasm. This is strikingly illustrated by the record of several cases recently reported in which, following ionization, there was complete absence of local symptoms, even in a pollen-laden atmosphere, but when the pollen content became extreme, the patients went into severe bronchospasm, with evidence of profound systemic intoxication. Examination of these patients showed the nasal passages to be abnormally open and it is reasonable to suppose that the lungs and bronchi received a more sudden and more massive dose of toxic material than they would have received, had the nose been untreated.

Clearly we have a situation here that is not simple and one that cannot be met by routine procedures. It is, indeed, one routine procedure; namely, the attempt to immunize by socalled antigen treatments, that produces a serious complication in many of these cases. Patients who have been subjected to such an addition to their already heavy toxic load are, as a rule, more difficult to relieve than those who have not. It is important to know in each case whether such attempts at immunization have been made and whether shock reactions have occurred, because there is an element of heart strain in such patients that cannot safely be ignored.

The introduction of ionization has not altered the fact that the successful treatment of these patients requires the combined efforts

of an internist and a rhinologist, each of whom should have some special technical training. I would particularly urge the rhinologist to procure the best electrical equipment and, if possible, have some personal instruction in the details of technic. He can thus avoid a period of trial and error and obtain good results from the start.

We now have reports from 42 patients ionized during the season of 1934, including 19 treated in association with Doctor H. C. Riordan, of the Oak Park Hospital. Two of these, as above noted, have had severe bronchospasm without hay fever. One was treated only on one side and had hay fever as severely as ever before, involving both sides equally. Three patients moved out of hay fever territory and are, therefore, not reportable as to results.

In two cases of perennial hyperesthetic rhinitis with seasonal aggravations, there was no relief whatever from ionization as a first procedure, but both have received proper general treatment following the season, with relief of symptoms up to this time.

One series of observations we were able to make was highly instructive. Having daily reports of the pollen content of the air, we were able to accompany each patient's clinical report with a statement as to the condition of the air he was breathing. We also had, for comparison, a number of untreated cases. The conclusion was inevitable that, while complete immunity is not obtainable, the threshold of tolerance is enormously raised by ionization and the degree of reaction greatly lessened. The untreated patient will have severe hay fever in an atmosphere showing as few as 50 pollen granules to the cubic yard, whereas, after treatment, he will often endure 300 to 400 granules without symptoms. It is probable that a count above 500, if long maintained, will produce some reaction in spite of any treatment, but no other of our cases showed more than slight annoyance, although the pollen count was at one time 1,000—the highest ever known.

All rhinologists to whom we demonstrated the technic last season were requested to send reports of their results at the end of the year, and 22 of these have very kindly done so. These reports include about 100 cases, showing results practically identical with our own. With our microscopic sections showing undamaged mucosa several months after ionization, it would seem that we now have a fairly accurate estimate of the rôle of ionization in the treatment of this syndrome. By the correct use of it, in suitable cases, the majority of hay fever patients are enabled to go through a severe season with no more discomfort than that occasioned by a slight "head cold."

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3.—Alden, Arthur M.: A Year's Work with Ionization in the Treatment of Hay Fever. *Laryngoscope*, September, 1934.

4.—Hays, Harold: Ionization of the Nasal Mucosa for Hay Fever. *Med. Rec.*, January 2, 1935.

5.—Haseltine, Burton: Ionization in the Treatment of Nasal Hyperesthesia. *Eye, Ear, Nose & Throat Monthly*, August, 1934.

6.—Haseltine, Burton: The Relationship of Asthma to Hay Fever. CLIN. MED., February, 1925.

122 South Michigan Ave.

## PROPAGANDA AND THINKING

*Are we, as a people, permitting propaganda to direct and guide us in the administration of local, state and federal government? Are we permitting propaganda to direct and guide us in the conduct of our business, our religious, social, moral and ethical actions? Indeed, are we permitting propaganda to direct and guide our actions even in the sacred family circles?*

*Have we, as a people, become too lazy to think for ourselves? Many able students of the subject so hold. Edgar James Swift, the eminent psychologist, says:*

*"Thinking has never been popular. It is too difficult. So any means of escaping from it has always been welcomed."*

*Kirkman, in his delightfully interesting book, "The Ministry of Beauty," states the same thought in this language:*

*"Strange is it that man will do almost anything rather than think. Because of his chronic lethargy, this indisposition to think, it takes a spartan to arouse him."*—COMMITTEE ON AMERICAN EDUCATION.

# Treatment of Superficial Skin Lesions with Bichloracetic Acid

By G. A. Rau, A.M., M.D., Two Rivers, Wis.

THIS report is the result of two years of inquiry into the possibilities of the extensive use of bichloracetic acid in the treatment of superficial lesions of the skin. Its aim is to discuss the general technic of use of this acid, and to detail the particular variations from the general technic, as demanded in treating various skin lesions.

Frequently, in general practice, the physician is required to treat corns and calluses. The practitioner will, very likely, prescribe some chemical such as salicylic acid dissolved in collodion, and instruct the patient to apply it at home. As in all self-medication, this method will yield varying success. Yet, to ask the patient to return daily for applications of the less drastic corn removers is obviously a disadvantage.

In looking for a chemical to remove corns and calluses, I tried trichloracetic acid. The chief objection is that, in the pure form, this acid is a solid, and to use the crystals is less convenient than to use a solution. Then, unless one wants to make up the solution repeatedly, one is never sure of its strength. Moreover, a solution has a much weaker action than a pure acid.

Attention was then drawn to the fact that pure bichloracetic acid is a clear, colorless liquid at ordinary room temperature. About the only literature bearing on the use of this acid in the treatment of corns and calluses is the article read before the surgical section of the Illinois State Medical Society, at Springfield, Ill., May 18, 1932, by Dr. Edward H. Ochsner, of Chicago.*

In this article, Dr. Ochsner highly recommends bichloracetic acid to be used in treating corns, calluses and warts. He states that his attention was called, as early as 1919, by Professor Louis Kahlenberg, of the Department of Chemistry of the University of Wisconsin, to the fact that bichloracetic acid dissolves keratin, the chief constituent of corns, calluses and warts. Dr. Ochsner used the acid for the relief of these conditions, and to him must be given the credit for the first clinical use of this invaluable chemical.

In its keratolytic property lies the chief value of bichloracetic acid, and the main point in the rationale of its use. Any medicament, to be safe, must be controlled without too much difficulty, and this acid has the advantage of being easy to control. Its affinity for abnormally thickened, horny layers of the skin makes it relatively easy to employ.

*The Use of Bichloracetic Acid in Surgery. *Ill. M. J.*, Aug., 1932.

In the above-mentioned article, the author advises the following technic:

1.—Apply vaseline, using a camel's hair brush, around the corn, callus or wart; this is done to prevent the bichloracetic acid from coming in contact with normal skin.

2.—With a glass rod, apply a little bichloracetic acid to the lesion. After this has been absorbed, apply a little more of the liquid.

I have never used this method. If, instead of using a glass rod, one substitutes an applicator stick, sharpened to a point, it will be perfectly possible to apply the bichloracetic acid in exactly the amount desired to just the areas desired to be covered. The wood absorbs the excess and, by varying the angle at which the stick is held, one can regulate the amount of acid applied. I have thus been able to control the application so well that the use of vaseline could be dispensed with. The acid has a pronounced tendency to spread over the skin area, however, and the use of vaseline merely constitutes an additional safeguard.

Dr. Ochsner recommends the use of bicarbonate of soda, moistened to form a paste, to be applied immediately should any acid be dropped on normal skin.

The following are some of the lesions, to cure which I have applied bichloracetic acid,† with satisfactory results; also details of the treatment which experience has shown to be most effective.

### Corns

The applicator stick is dipped in bichloracetic acid and applied to the thickened area. In a short time (from one to three minutes), the liquid is absorbed. If one then examines the surface of the lesion, it will be noted that fine, yellowish-white striations can be seen deep within the skin, below the area treated. This is not a constant finding. As soon as the surface is dry, a second application of acid is made.

The patient is told to return in from three to five days, at which time the corn will be very hard, and before a second application of acid is made, one must remove the outside layer of horny tissue. To do this, it is best to use a sharp scalpel, laid almost flat along the surface of the corn, and remove very thin scales of tissue. A few treatments will give the practitioner experience sufficient to enable him to judge just how much skin to remove.

†The bichloracetic acid used in these studies was furnished by the Kahlenberg Laboratories, Inc., Two Rivers, Wis.

After this, a second application of acid is made.

In general, the first application of bichloracetic acid will give complete relief from pain, and in most cases two applications will suffice to remove the corn. It is advisable, also, to have the patient soak the foot in hot water, twenty to thirty minutes daily, to soften, as far as possible, the underlying horny tissue.

The practitioner must stress the necessity of the patient's wearing proper shoes, since, if the cause of the corn is not removed, the lesion will surely recur. Constant pressure causes atrophy, and intermittent pressure hypertrophy. The friction of the shoe against the toe will surely cause recurrence of the corn.

*"Soft Corn":* This lesion, usually involving the web between the fourth and fifth toes, responds very well to treatment with bichloracetic acid. One or two applications are made at the first visit and the patient returns in from three to five days, when the skin will be found whitened and loose and, if the foot has been soaked just before the patient comes to the office, the practitioner can remove the surface skin by grasping it with tweezers. Usually a deep hole will be seen, penetrating the center of the corn. One more application to the corn will usually suffice to cure it. The liquid must be applied to the whitened skin, and the lining of the hole in the corn must be touched also. The patient is advised to wear some appliance to keep the fourth and fifth toes separated thereafter. Frequently, a cotton pad or talcum powder will accomplish the purpose of preventing the maceration caused by the moisture of the overcrowded toes. Here, too, the patient must be cautioned to procure properly fitting shoes.

*Calluses:* These can be removed entirely with one or two applications of bichloracetic acid, used at intervals of five days. It is seldom necessary to remove any tissue at the second visit, but if one desires to do so, one should use a sharp scalpel, as in removing the horny tissue from the surface of a corn.

### Hypertrophied Nails

In onychogryphosis, one finds the nail greatly thickened and deformed. In two cases I have seen, the nail of the great toe was involved. The etiologic agent, in both cases, was the *Fungus epidermophyton*, and the infection had persisted in one case for five years, in the other, three years. Coincidentally, the external half of each nail was involved, and further, a patch of eczematoid eruption appeared on the skin of the medial surface of each heel. The part of the nail involved was brownish in color and was about a quarter of an inch thick. It was of a spongy consistency and crumbled readily when grasped with forceps. It is to be noted that, although the thickening had prevailed for years and the nail had broken to allow overriding of flesh, the nail was so soft and "crumbly" that no ingrowing had occurred.

In removing the outer layer of the spongy nail, a sharp scalpel was used, and the deeper part of the nail was seen to contain numerous longitudinal striations, yellowish-white in color, of the same consistency as the rest of the nail.

The case was treated with potassium permanganate and with salicylic and benzoic acid compounds. These were applied directly to the eczematoid eruptions and to the brownish blebs (characteristic of the epidermophyton infection) appearing on the other skin surfaces of the foot. While these preparations caused scaling and softening of the superficial layer of skin, the fungus was not killed and the lesions remained.

At this time it was decided to use bichloracetic acid, and the eczematoid lesions were given one application each. The patients complained of intense burning and, on the return to the office, five days later, severe second degree burns were found to have resulted. In about ten days to two weeks these had healed, and the eczematoid patches were as marked and as irritating as before.

I then decided to use bichloracetic acid on the nails, reasoning that its great keratolytic property would undoubtedly cause penetration throughout the nail, with destruction of the fungi. It was felt, too, that the lesions on the heels were epidermophytids and might respond if the foci in the nails were removed. Cotton was placed under the nail edges and around the nail borders, to prevent the acid burning the skin. In one case, only two applications were needed. In both cases marked improvement was seen. The brown, spongy nail disappeared almost entirely; some of it was removed at the time of the second application (five days after the first).

The nail grew normally; it recovered its consistency, color, and thickness. It grew so well, in fact, that in both cases an ingrown nail resulted. These were corrected by keeping cotton beneath the nail edge until they had grown to normal length. In the case where only two applications of bichloracetic acid were needed, the nail is now normal. In addition, the skin of the heel is normal. I interpret this as showing that the lesion on the heel really was an epidermophytid. The other case is markedly improved; the thickening of the nail has not returned, though the anterior edge is still discolored. The lesion on the heel is not improved as yet, but it is my belief that it will clear up after the discolored area is removed. Since this nail has not yet grown to normal length, I shall wait until it does so, rather than cause further ingrowing. However, any of the discolored blebs which appear in the skin of other parts of the foot are treated with bichloracetic acid. The patients are told to sterilize their socks

and shoes, though the best methods available do seem inadequate protection against reinfection.

### Warts

Warts are treated with two or three applications of bichloracetic acid, with a five day interval between applications. On any visit subsequent to the first, a scalpel is used to shave off the outer tissue of the wart. Frequently, the entire wart can be lifted out at the second application. When the raw, readily-bleeding, underlying tissue is exposed, the patient is told to return in about two weeks. At the end of that time, if any of the wart persists, one or two applications, at five-day intervals, will suffice to remove it.

*Pedunculated Warts.* These unsightly blemishes can be removed by one application of bichloracetic acid. They can be grasped by forceps and the pedicle stretched. The acid is then applied to the pedicle. In from two to five days the wart drops off, without bleeding.

### Seborrheic Dermatitis

These lesions, frequently disfiguring elderly people, are treated, when small and circumscribed, with one or two applications of acid, the interval between treatments being about ten days. The patients are warned that a scar will be inevitable; yet they prefer a white scar to the unsightly brown lesion. Furthermore, they usually come to the practitioner because of fear of malignant disease, and while one should assure them of the benignity of the lesion, they will not rest until it is removed. The lesion loosens at the edges, and finally falls off, leaving a red area, seldom exceeding one-sixth of the diameter of the original lesion. This in time bleaches so completely as to be unnoticeable.

### Moles

The ordinary pigmented or hairy mole seldom needs more than one treatment with bichloracetic acid. Here, too, one must warn the patient that a scar will result; yet the scar is so small, and so white, it will be preferred to the mole.

An objection has been voiced to the removal of moles with this acid, the idea being that it may cause malignant growth. I submit the opinion that coagulation by bichloracetic acid is just as rapid and complete as is that produced by the coagulating electric current, and that it seals off lymph and blood vessels as rapidly and effectively as does the current. It does its work with less trauma (and better cosmetic effect), than does the scalpel.

### Tattoo Marks

I have removed tattoo marks, in three cases, with the bichloracetic acid. In this treatment, after one application of the acid, there will be a sloughing of the skin, which will usually be complete in from fifteen to twenty days. When the sloughing is completed, the practitioner will be able to detect the presence of pigment, if any remains. In general, ninety to ninety-five percent of the pigment will be removed by the first treatment. But since the tattooing process usually deposits pigment at different levels, it is obvious that, in the removal process, one may remove the more superficial pigment, while the pigment more deeply deposited remains after the sloughing has been completed; another application of the bichloracetic acid must then be used, care being taken to cover only the areas still containing pigment. The results are satisfactory; yet one must hesitate to recommend the method for large tattoo marks, because of the severity of the burn necessary to remove the pigment.

It is obvious that the skin tissue must be destroyed so completely as to lay bare the subcutaneous layer, but I continue to use the method for small tattoo marks. One might add that, after the sloughing has been completed and granulation tissue is seen, scarlet red ointment will hasten the healing process. The patient must be warned that he will have a bleached scar; yet most frequently he will prefer it to a tattoo.

### Xanthelasma

These yellowish, fatty-appearing blemishes are readily removed by one application of bichloracetic acid. Since they occur on the eyelids, and because they are of very slight density, the practitioner must apply the acid very lightly. It is sufficient merely to dip the sharply pointed stick in the acid and to touch the lesion with very little pressure. In from seven to ten days the resulting blackened crust falls off, seldom leaving a scar. I have had no scars result after treating forty or fifty such lesions.

In using bichloracetic acid in treating the various types of skin lesions detailed above, the practitioner will note the complaint that the acid "stings" for from thirty minutes to an hour; after that, there is no pain. Even the extreme burns after removal of tattoo marks cause no pain, the inconvenience in these cases being in the fact that they discharge, as do all granulating surfaces.

Frequently one will note that white patches occur where the acid has been applied. These are of no serious import, since the acid seldom penetrates beyond the lesion treated. On normal skin, the acid will cause these burns, unless neutralized or washed off at once.

One should not attempt to treat keloids with bichloracetic acid. People of the "keloid type" will regenerate keloid after such treatment, just as they do after any burn. But for treatment of the lesions detailed above, bichloracetic acid will be found entirely satisfactory, and it is my belief that, in lesions where the choice lies between electrocoagula-

tion and bichloracetic acid, the latter will give better results, with less pain. For the treatment of corns, calluses, warts, fungus infection of the nails and xanthelasma, it has no equal.

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# Gelatin in Medicine

By Walton Forest Dutton, M.D., Amarillo, Texas

THE history of the use of gelatin in medicine dates to the gray dawn of antiquity. Chinese pharmacology (the work of Lee-Shee-Tshin) makes frequent reference to its preparation and use, both internally and externally. Gelatin has been used as a hemostatic agent in China and Japan since prehistoric days. Its use for this purpose has not been general in Europe and America.

Gelatin has been described as a protective colloid, as it prevents certain colloids from precipitating in the presence of acid or salts, as in the digestive juices. It is easy to digest, readily absorbable and rich in the growth-stimulating amino acid lysin, but it lacks tryptophan and so there is no decomposition in the intestine into skatol or indol or its compounds. Tyrosin and cystin are also practically absent.

Though gelatin, like many other proteins, belongs to the "incomplete" class; i. e., it cannot supply all the amino acids which the body requires (tryptophan and oxyglutamic acid are practically absent), it does contain a considerable variety of these acids in a readily accessible form and is a very easily digested protein.

### Therapeutic Uses of Gelatin

Gelatin (U.S.P.X.;B.P.) is the purified product obtained by boiling animal tissues, such as skin, ligaments, tendons, bones, etc., with water. It occurs as amorphous, brittle, transparent, tasteless sheets or flakes; soluble in hot water, acetic acid or glycerin; insoluble in alcohol, chloroform, ether, benzene, carbon disulphide or fixed or volatile oils.

The *sterilized solution, for injection,* is prepared from fresh calves' feet, under special, aseptic precautions, and *very carefully sterilized to kill possible tetanus spores. No preparation of gelatin should be injected unless it is guaranteed by a reliable manufacturer to be absolutely sterile.*

In patients with a definite history of asthma or sensitiveness to foreign proteins, gelatin should not be administered parenterally without first making a test for sensitivity by an intracutaneous injection of 0.2 cc. of the solution to be used. It should not be given if the test is positive.

*Action: Nutrient; hemostatic; stimulates the organism in the formation of antibodies and in overcoming infection.*

Dastre and Florescu (1896) found that gelatin, when injected intravenously in dogs, shortens the coagulation time of the blood. Injection of 0.8 Gm. per kilo made the blood clot almost instantly on being drawn; and an injection of 0.3 Gm. per kilo hastened clotting distinctly. Gelatin also increases the firmness of the clot. It increases the clotting of peptone blood, but not that of oxalate blood. This would seem to prove that the action of gelatin is not due to calcium.

Carnot reported that gelatin in solution is hemostatic when applied externally to wounds and ulcers. It is deprived of much of its activity by the heat in complete sterilization, and larger doses of heated preparations are required to secure results. Wood found that the products of artificially digested gelatin, when injected intravenously in dogs, reduced the average clotting time from 3½ minutes to 1 minute.

In addition to the decreased clotting time, gelatin brings about increased viscosity and a tendency of the red cells to adhere in large clumps that mechanically occlude the lumen of the blood vessels.

Various opinions are expressed as to the ineffectiveness of gelatin which has been heated to 140°C., or similar high temperatures. There is doubt as to the possibility of efficient sterilization, especially in view of its frequent contamination with tetanus spores. However, it is much safer to use the strongly heated gelatin, even though it is less effective. This applies more specifically to injections, rather than to use in open wounds accessible to air.

Gelatin has been considered inferior to acacia as a perfusion fluid, on account of the difficulty of sterilization. However, the highly scientific methods of reliable manufacturers have produced a gelatin which is absolutely sterile.

The action of gelatin which brings about coagulation of blood is not clearly understood. It may be inferred that its acidity, and also the calcium, which ranges from 0.6 to 2 percent, are important factors. There is an effect on the fibrinogen itself—an apparent neutralization of antithrombin, not unlike the effect of tissue extracts. Oxalates prevent clotting of gelatinized blood, which tends to show that there is no direct formation of thrombin.

The effect of gelatin is markedly increased by previous hemorrhage. It is effective, both topically and systemically, in hemophilia. In action it resembles tissue coagulins, but there

is no chemical relationship. Gelatin differs from tissue extracts in that it is ineffective in the presence of large amounts of hirudin in the blood.

Cesona believes that gelatin may act by destroying the blood platelets, and thus releasing the thromboplastic substance which they contain. It contains an element producing thromboplastic substance or thrombokinase. This element, when isolated, will prove an invaluable aid in combating hemorrhagic conditions.

In addition, gelatin has proved to be a valuable agent in protein therapy.

*Uses: Topically: In epistaxis, hemorrhoids, tumors of the bladder, hemorrhages from the stomach and bowel; in gastric and intestinal ulcer, typhoid hemorrhage and dysentery; in colitis.*

*Systemically: In hemoptysis, hemophilia, hematemesis, melena, hematuria, metrorrhagia, etc.; in snake-bite, to counteract the hemolytic action of snake venom; in aneurism; in pleuritic, aneurismal and articular pains; in progressive paralysis; as a non-specific protein in acute and chronic infections of hemolytic character.*

**Gelatin in Infant Feeding and Adult Diets**

Jacobi, in 1879, suggested the use of gelatin in infant feeding, but until recently it has not been very extensively used. It is of great value as an additional food in malnutrition and lack of growth, particularly when this is associated with putrefaction in the intestine. In celiac disease it is of great value. In chronic intestinal indigestion and in certain forms of diarrhea it is of benefit, not only as food, but in lessening the intestinal disturbance.

Gelatin shows much promise as an infant food, especially as a milk diluent in infant formulas. J. Alexander, P. B. Hawk, and T. B. Downey believe that the rôle played by the gelatin is that of a protective colloid, modifying the curd formation of the casein during digestion. R. M. Washburn, and also L. S. Palmer and G. A. Richardson, find no evidence of such an action. Work that has been done in attempting to ascertain the part played by gelatin in enhancing the availability of cow's milk has given nothing of clear value. While there is probably little or no influence of gelatin upon the size and rate of formation of casein curds, the texture of the curds formed is still an open question, and may be a matter of some moment.

Gelatin is used in the adult diet primarily in the form of salads and desserts, making the many attractive dishes with which all are familiar. Its use in the manufacture of ice cream is practically universal; about 0.5 percent of gelatin is used and gives the cream a smooth, velvety texture. The great advantage of gelatin in special dietaries, particularly those for use in hospitals, lies in the fact that it is a pure protein, of known caloric value (making it a simple matter to calculate formulas), readily assimilable, and easily combined with practically any other form of foodstuff, especially vitaminous foods of value in the various socalled deficiency diseases. The above-mentioned quality, that of adding attractiveness to dishes, is of particular importance in preparing special foods for invalids and convalescents, where, for psychologic reasons, the appetite must be tempted in every way possible.

**Parenteral Administration**

Epistaxis may be controlled by an intranasal spray of a 5 to 10 percent aqueous solution, or by packing the nose at the site of the hemorrhage with gauze saturated with a 10 percent aqueous solution.

*Bleeding from hemorrhoids, from the throat after tonsil operations, from tumors of the bladder or from the uterus,* can be arrested, at least partially, by the application or instillation of like solutions. Hemorrhages from the *lower bowel,* as well as in *colitis,* are benefited by high enemas of 500 to 1,000 cc. of a 12 to 15 percent aqueous solution.

*In hemoptysis, hematemesis, melena, hematuria, metrorrhagia, metrorrhagia myopathica, and hemophilia,* gelatin may be administered *subcutaneously, intramuscularly* or *intravenously. Subcutaneous* injections are often exceedingly painful. This is prevented by first injecting 0.5 cc. of Nupercaine, 1:1,000 in physiologic sodium chloride solution, with 0.5 cc. of epinephrin hydrochloride, 1:1,000 to each 100 cc., and then, without withdrawing the needle, injecting the gelatin solution through the same needle.

A gelatinized solution suitable for *subcutaneous or intramuscular* use is made by dissolving 5 percent of gelatin and 1 percent of calcium gluconate in distilled water and sterilizing by heat. In *aortic aneurism,* from 25 to 50 cc. may be injected under the skin of the back, or *intramuscularly* in the buttocks, *but never intravenously or into the aneurismal sac.* The solution should be heated to a temperature slightly above that of the body (38°C. or 100°F.). The injections sometimes cause hyperpyrexia with chills, lasting one or two days. There may be pain, redness and induration at the site of the injection. This solution (10 to 20 cc.) may be used against internal hemorrhages to meet indications, either *subcutaneously* or *intramuscularly.*

Indications for the introduction of gelatin solutions in quantity and otherwise than by the mouth are many, but they may be included under the general heads of *blood and fluid losses; shock, apart from traumatism; infections and other disease poisonings; and non-specific protein therapy.*

The usefulness of *intravenous* injections of gelatin solution and the possibility of sub-

stituting it for the transfusion of blood in the condition that follows profuse hemorrhage, depends upon the fact that there still remains in the organism a sufficient number of formed elements to carry on function, provided the fluid to be supplied maintains cardiovascular tone and potency and conveys blood constituents to and from the lungs and tissue capillaries.

The compensatory mechanism of the cardiovascular system brings the lesser elements of the blood into activity. Bonemarrow and other hemopoietic tissues are stimulated and the gelatin solution provides a ready means of transport for their products to the depleted areas.

The pathologic conditions requiring the necessity of this measure are many and varied. They may, however, be considered in two classes: (1) Those in which the source of the hemorrhage is evident and readily accessible; and (2) those in which it is concealed, inaccessible or difficult to get to. If the injured vessel is accessible, it should be ligated immediately. The injection should be given during and following the operation. In the other group of cases, the question may arise as to the feasibility of the injection before, during and after operation. This, in a measure, must be decided according to the condition confronting the operator. In some instances, it is better to wait upon spontaneous cessation of bleeding or upon the result of hemostatic medication.

It should be remembered that, in this condition, large infusions increase the pressure upon the vessels at the seat of the hemorrhage, and are usually contraindicated. A large infusion should not be made until the bleeding vessels have been secured or there is reason to believe that an internal hemorrhage has been arrested by a firm clot at the point of rupture. Procrastination, however, is disastrous. A small quantity (100 to 200 cc.) of a hot (110°F.) and slightly hypertonic gelatin solution (calcium gluconate and gelatin in Locke's solution) may be administered slowly by the most practicable route. If there is shock, add 10 to 30 minims of epinephrin solution, 1:1,000, to the solution to be injected.

The solutions have a distinct hemostatic effect. They increase the deposition of blood platelets and aid compensatory contraction of arterioles and capillaries. There is increased thrombus formation and maintenance of vasomotor tone, without dangerous increase of general blood pressure. In contradistinction, large infusions cause increase of blood pressure at the bleeding point, or vasomotor relaxation, especially in the splanchnic area.

*The questions whether the solution should be used before, during or after operation; or before, during or after the spontaneous cessation of hemorrhage; the choice of route; the exact quantity and rate of flow, must be answered by the surgical judgment in each individual case. Modern technic has made intravenous injections and the intravenous drip methods of choice.* If these are not available, *hypodermoclysis, enteroclysis or intramuscular* injections should be used. *Gelatin solutions are contraindicated in traumatic shock unattended with hemorrhage.*

### Hemorrhage and Shock

Gelatin solutions may be employed to remedy loss of blood attended by shock in the following conditions: *gastric and duodenal ulcer; large venous hemorrhage from the stomach or esophagus, dependent on cirrhosis of the liver; excessive hematuria from renal calculus, tumor and other mechanical causes; hematuria of Bright's disease; large or repeated hemorrhages in typhoid fever; the hemorrhage of acute pancreatitis; menorrhagia, excessive uterine bleeding from tumors and other causes; post-partum hemorrhage; rupture in ectopic gestation, etc.*

Calcium gluconate and gelatin (2 percent), in 10 percent dextrose solution, is an effective prophylactic measure to diminish bleeding, when given prior to certain operations upon the liver. *Intravenous* injections of 4 fluid ounces (125 cc.) of a 2 percent solution of gelatin are *recommended to counteract the hemolytic action of snake venom.*

Gelatin solutions in slightly hypertonic saline solution are also indicated in fluid losses other than blood—in *Asiatic cholera; cholera nostras, summer diarrheas; dysentery; profuse intestinal discharge from mineral poisons; postoperative nausea and uncontrollable vomiting, whether toxic or of nervous origin; and dehydration and hypochloridation, whatever the source.* The hypertonicity of the solutions not only replaces the water and salt, but conserves the mineral content of the blood above normal by reversing of the osmotic currents from an outward to an inward flow.

### Infections and Intoxications

The salutary effect of gelatin-dextrose-saline solution in infections and intoxications is worthy of mention. It is of special value in *acute lobar pneumonia; typhoid fever; scarlatina; acute articular rheumatism; endocarditis; in puerperal septicemia; in postoperative septicemia and in surgical or other general sepsis. In relapsing fever, in tetanus, in erysipelas and in yellow fever* it is of distinct benefit. Favorable results are attributed to the use of the solution *in puerperal eclampsia, in uremia, in diabetic coma and other forms of acidosis. Alcoholic coma* has been relieved by simultaneous bleeding from one vein and the injection of the solution into another vein.

*After poisons, such as hydrogen sulphide,*

*carbon monoxide, phenol, ether, chloral, morphine, arsenic, phosphorus, mercury and poisonous mushrooms and ptomains,* the acute or chronic influences have, with or without venesection, been ameliorated or entirely relieved by the gelatin-dextrose-saline solution.

The solution has also been used in the treatment of various *psychoses,* on the assumption of the toxic origin of these conditions. *Hysteria, hypochondriasis and neurasthenia* have been treated on a similar hypothesis.

### Other Conditions

The solution mentioned has been used as a medium for the administration of other drugs in *malignant syphilis, mycosis fungoides, chronic local lesions of the skin and persistent glandular enlargements.*

Gelatin-glucose-saline solution, in quantities over 50 cc., is *contraindicated* in *uncompensated cardiac valve lesions; in cardiac dilatation or mysthenia; in degeneration of the myocardium; in arteriosclerosis with hypertension; in pulmonary congestion or edema; in all cases in which the kidney is not able to respond to stimulation; in uremia with salt retention; and in the presence of dropsy.*

The apparatus for subcutaneous or *intramuscular* injection consists of glass syringes and needles, to meet the requirements; for *intravenous* infusion it comprises: (1) a reservoir for the fluid, with some means of maintaining its heat; (2) a connecting tube; (3) a needle or cannula to suit conditions. The Good Samaritan infusion radiator has proved to be entirely satisfactory for this work.

### Comment

In drawing conclusions from experiments, as regards the clinical application of the findings, it must be remembered that we have, on the one hand, normal animals, and on the other sick men. The normal animal, even after extensive blood loss, still has the powers of fluid readjustment intact; whereas the man with hemorrhage and shock is suffering from a profound disturbance of his whole neurocirculatory mechanism.

A great deal of misinformation, emanating from research workers, has been disseminated through the medium of some of our leading medical journals, concerning the parenteral use of medicaments. Lethal doses of drugs administered to morphinized dogs have been the basis for deductions arrived at during such experiments. Reports of such work, if accepted as final, could be fraught with disastrous consequences. Such investigation is elementary. Certainly it is not fundamental.

There has been some controversy as to the relative merits of acacia and gelatin. Acacia appears to have a viscosity equal to that of the blood and an osmotic pressure equal to that of the colloids in the blood under normal conditions. However, it does not supply any elements necessary to the economy of the organism. In other words, it is simply a mechanical agent rather than one activating body tissues. The osmotic pressure of a gum solution must equal that of blood colloids to prevent loss through osmosis.

Gelatin not only possesses the properties of a gum, but also those of a nutrient, hemostatic and stimulant to antibody formation. It is also an animal tissue, with elements of an incomplete protein.

### Summary

Gelatin is a valuable adjunct to infant feeding and in adult dietaries. It is of particular importance in preparing special foods for invalids and convalescents.

Only absolutely sterile gelatin, guaranteed by a reliable manufacturer, should be used for medical purposes.

Solutions for topical application range from 5 to 12 percent; for subcutaneous or intramuscular injection not over 6 percent; for intravenous use, not over 2 percent.

Gelatin solutions may be used with dextrose calcium gluconate, or sodium chloride, or all may be used in combination, in hemorrhage.

Gelatin is a reliable antibody stimulant.

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## INVENTORIES FOR SUCCESS

*Medical men are often made very sad when a man comes to them to be examined and they have to tell him he has come too late. If he had come earlier they might have checked the disease which inexorably is sapping away his strength. Considerations such as this lead medical men to advocate an annual overhaul, so that they may be able to safeguard our health. The same principle holds true with regard to failure. Every aspirant to success should put himself through a vigorous overhaul at least once a year, so that he may know where he stands, and may be able to estimate what progress he has made.*—JAMES ALEXANDER in "Through Failure to Success."

# Spontaneous Disappearance of Flat Warts

## (A Clinical Note)

By Herman Goodman, M.D., New York City

REPORTS appear, from time to time, of apparently miraculous cures of warts (usually flat or juvenile warts) by one or another unconventional agency. Cures by mental suggestions are seriously offered, for example.

Fig. 1.—Patient with multiple flat warts on the face.

The two photographs presented herewith are thought worthy of publication, together with the circumstances attending the disappearance of the many warts seen in the first picture.

Eight years ago, having instituted a new and improved lighting system for clinical photography at my office, I invited the parents of a child patient with verruca plana to bring the patient for a sitting. The picture was taken on the same afternoon (Fig. 1). The parents were requested to bring the child again, two days later, so that treatment could be given. In the meantime, the film was developed and a print made.

When the parents brought the child forty-eight hours later, they were as delighted as we were astounded. The face of the child was absolutely clear. No treatment had been given nor had the parents applied any medicaments. The second photograph (Fig. 2) was made at that time.

I have since had patients with warts which disappeared under other curious circumstances. A patient with many warts, for example, permitted me to treat only one of them—a painful one. It was fulgurated. All her warts disappeared when the one treated resolved.

I also observed a physician with many of the "garden variety" of warts on his hands and on covered parts of the body. Exposure of one wart to roentgen irradiation was followed by the disappearance of all the warts.

A dentist (woman), with many painful plantar warts, asked me to treat one on the part of her foot where she pressed her dental engine. All the warts from *both soles* disappeared without any other treatment.

Fig. 2.—After 48 hours: no treatment given.

I suppose one explanation is that the warts were ready to disappear at that moment, but that explanation—which isn't one—throws us back into an era before we appreciated toxins, auto-toxins, antitoxins, endotoxins and what have you. I must leave to others the solution of this clinical observation.

In the meantime, we may ask ourselves, How do the remedies work which we apply to warts?

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**PROGRESS**

***Progress in the rearing of the edifice of human culture and achievement is possible only by preserving carefully what has already been done, so far as it is good and useful, and proceeding to build upon it that which is necessary to bring it to its ultimate perfection.***—Tradition, CXIV.

# The Doctor in War

By G. P. Lawrence, M.E., M.D., Westerville, Ohio
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IN considering the problem of national defense, it is most appropriate that we look forward into the future and attempt to see what will be the situation and needs. The army, being composed of professional soldiers, is well acquainted with past events and is continually studying the possibilities and probabilities of the future. The civilian frequently ignores problems of national defense, because they seem of no immediate concern to him. However, our defense plan is based upon the assembling of untrained civilians and welding them into an efficient army. One of the important services in connection with the formation of an army and its care in the field is the Medical Department. It is, therefore, most appropriate to consider the civilian doctor's part in a national military emergency.

### War in the Air

Many writers have pointed out that the next military emergency will, more than ever, be a mobilization of the entire nation. Not only will the young manhood of the country be called to the colors, but industry and finance will likewise be welded into a homogenous team, working for the nation's objective. However, relatively few people have called attention to the fact that military tactics are changing; that the next war will be fought by tremendous air forces, operating according to the Douhet doctrine. In short, the main attacks will be, not against a thin fringe of troops more or less securely entrenched, but huge air bombers, operating far behind the lines, will bomb and destroy factories, railway centers and storage warehouses, in the attempt to cripple, at the source, the resources of the enemy.

Already three of the principal nations of the world—Italy, where the doctrine originated, England and France—have recognized the inevitable superiority of such tactics and have, in order to utilize them to the best advantage, organized large air forces, independent of army and navy control, and are training them to utilize to the fullest the peculiar advantages of the air arm of national defense. Presumably Japan, Russia and Germany have done the same or have planned such a move.

Some day, the powers-that-be in our nation will be convinced of the military necessity of preparing along the same lines as have already been followed by the other principal nations of the world. One cannot expect an elderly gentleman, brought up on the good old tale of Darius Green and his flying machine, and still imbued with something of that viewpoint and vastly disturbed at the idea of flying through the air at three or four miles a minute, to have a thorough understanding of the problems of the air forces or to be in sympathy with their undignified and unorthodox objectives. Only when we organize an independent air force, officered from bottom to top by experienced and enthusiastic fliers, will the air weapons be given a real chance to develop and demonstrate their possibilities.

The first step in this direction is now being taken by uniting all the scattered units of the Air Corps in a G.H.Q. Air Force, commanded by an experienced flyer. Whether this will develop into a full-sized air force for use in the next unpleasantness, one can only guess. However, if and as it does, the medical officer will have new problems to face. The flight surgeon is now an unusual specialist, of which there exist as few examples in civil life as there are giraffes in the same vicinity.

In the next major emergency confronting the United States, our enemy will undoubtedly strike at our centers of supply and distribution. In fact, the main effort will be scattered all over what used to be considered non-combatant territory and the victorious army will have little to do in the war but putter around the edges of things until the time comes to march in and take possession of the starved, disarmed and demoralized nation.

Obviously, the life of the civilian population will be vastly different under such a program of warfare from what it was in the World War. What will be the civilian doctor's part in such a national military emergency?

### Building the Army and Navy

The first act of the nation, in the event of mobilization, will be to build an army and expand the navy to war strength. The present mobilization plan is based upon four field armies, comprising, in all, approximately 125,000 officers and 3,000,000 enlisted men. The Regular Army and the National Guard now comprise just over 300,000 or almost exactly one-tenth of the total required. There would be needed about 2,750,000 new men to complete the army, and a proportionate number for the navy, all to be procured from civil life, made fit for field service and trained in their new duties.

Undoubtedly they would be obtained through some sort of "draft" procedure. Upon the civilian physicians of the country would fall the duty of selecting, from the mass of manhood set before them, those fit for military duty. Those who remember the results produced by some of the "local draft boards" in 1917 will most fervently hope that the pro-

fession as a whole will be more enlightened next time on the standards of the army physical examination. Sometimes the men who reported at camp were most convincing evidence that some of the followers of Esculapius had the welfare of the old home town much more at heart than the efficiency of the army. Perhaps education will produce a better understanding of the whole problem on the part of all concerned.

We can, at this time, divide civilian physicians into two classes: Those who have seen their duty and prepared in advance for active participation with the troops by obtaining membership in the National Guard or Officers Reserve Corps; and those who, for various reasons, have made no such affiliation.

Of the first group little need be said. They are all receiving, or at least have the opportunity to receive, a small amount of training, sufficient to acquaint them with the rudiments of military science. They will see a national crisis approaching and will probably have time to prepare their affairs and turn over their practices to their stay-at-home confreres. How much of these practices will return to them at the end of the war is problematic, but experience shows that it will probably not be enough to be worth worrying about. A proportion of them who have kept themselves qualified for tactical command will immediately enter into a strenuous period in camp, organizing and training the companies and regiments which they now command on paper. Others, as their subordinates, will also enjoy the privilege of working with young men, building teams for the efficient carrying out of the mission of the Medical Department in combat, which is the rescue of the wounded and their transportation to the rear, where they may receive hospital care. Others are assigned to the combat arms of the army where, as the medical officers of fighting troops, it will be their duty to guide and counsel their commanding officers in all matters of health, and to supervise training and living conditions of the soldiers, to the end that they be put into the best possible health and kept in the proverbial "pink of condition."

### The Army Surgeon

The surgeon of an army unit occupies a unique position. Unlike his brother in civil life, who has to spend years in acquiring a reputation in his community and building up a following, the military physician's practice is dropped in his lap full-fledged over night. Each and every member of the command to which he is assigned is, by virtue of that assignment, his patient, his responsibility and his privilege. The military surgeon spends but a small part of his time sitting in his office receiving patients who come to him. Much of the rest of the time the real go-getter medical officer is out looking for work to do, "hunting for trouble," as many have so aptly accused him. The alert medical officer does not wait for trouble to find him, but seeks it out before it arrives. In a superlative degree he has the greatest opportunity of any physician to do a real public health work by inspection of camp sites, water supplies, recreation places and every point of contact of his command. He discovers health hazards in advance and institutes measures to avoid or minimize them.

As the surgeon of the command, he reports frequently to his commanding officer on the health of the organization and measures advisable to conserve it. The good commanding officer listens carefully to such advice and sees that it is carried out to the fullest practicable degree. In some instances the medical officer has under his command medical soldiers who take the necessary measures. Frequently the carrying out of the surgeon's advice is outside his province, as it often involves the promulgation of orders which he is not authorized to issue. However, his recommendations, submitted to his commander in the form of a suggested order, are usually placed verbatim into the commander's orders, as one of its principal paragraphs, thus giving it more real authority than it possibly could have carried over the signature of the surgeon. Occasionally, military necessity prevents the following of medical advice, but the commanding officer who habitually ignores his surgeon's counsel seldom gets far.

A large number of physicians will be needed to staff military hospitals. Fortunately, the work in such hospitals is so nearly like that which the average doctor does in civilian life that the new arrivals will not have much difficulty in adjusting themselves to the new regime. However, army organization and exigencies are such that it may be necessary to assign a gynecologist to do eye, ear, nose and throat work, or a pediatrician to take charge of the "G.U." ward. Sherman told us, many years ago, what war was, so what else could a doctor expect? The specialist with the background of five or ten years of general practice has this foundation training to fall back upon and will be able to function in any assignment, but some of the new-style brand of specialists, who never trouble their pretty brains about "foreign" parts of the body and their diseases, will certainly believe Sherman's doctrine.

Many of the physicians who have not been members of the Reserve Corps will undoubtedly volunteer or be drafted into the military forces. Commissioned in the junior grades, they will be valuable and necessary members of the hospital staffs at home, in the training camps, or at the bases in the field.

In a similar way, the navy and its reserve will have to be expanded, hospital ships extemporized and staffed, and naval hospitals

ashore set up. Life aboard ship is vastly different from that ashore, but the naval medical officer occupies a very similar position to his brother in the army and, therefore, what has already been said will apply with equal force to the nautical branch of the service. The doctor who is immune to *mal-de-mer* and hankers after travel may well consider the charms of the navy. He will run a large chance of being assigned to a torpedo boat or a hospital ashore.

### Gas Warfare

Newspaper and magazine writers periodically break into print with lurid discussions, more or less authentic, regarding the use of gas and disease germs in warfare. There is a great popular horror of and prejudice against the use of such weapons.

The facts are that several gasses were used to a considerable extent during the World War, in spite of the popular horror, and proved to be most effective weapons. For the same expenditure of ammunition, gas produced a much larger number of casualties than did the older types of ammunition—shot and shell. Of these casualties, the proportion killed was very much smaller, and the disabled required a greater number of medical personnel to care for them than the same number of shell and shrapnel casualties required. This removed a greater proportion from the fighting line to the medical department, still further weakening the power of the same sized army. Also, gas masks and protective clothing and dugouts are expensive and very cumbersome, lowering markedly the efficiency of the individual soldier.

Furthermore, gas is effective for long periods after it has contaminated the ground and foliage, and thus a given amount of ammunition will produce more casualties, and a single battery of artillery can cover much more territory effectively with gas than with shrapnel.

And last, by far the larger proportion of the gas casualties not only lived to tell the tale, but recovered promptly to the stage of economic and even military effectiveness, and with a much smaller proportion of crippling or disfiguring wounds.

Thus we find that gas is a more efficient weapon than the old types of ammunition, and, public opinion to the contrary notwithstanding, that it is more humane, producing much less remote and permanent suffering.

With all these advantages and in view of the facts that armies always use the most effective weapons they can get, and that nations have ignored treaties in the past when it was to their advantage to do so, it not only seems logical to presume, but it seems foolish to ignore the probability, that noxious gasses will be used in the next and all future wars until science discovers something still more effective to supersede it, and that they will be used on a larger scale than ever before. Consequently, the medical officer of the future will have to do much more work with gas casualties than his brother of 1917-18, and will have to train his enlisted men accordingly. The advent of new "gasses" will continue to introduce further new problems to disturb the medical and chemical warfare officers and to keep them awake nights to devise methods of protection and neutralization.

It does not seem logical, in view of the present knowledge of medical science, that disease germs can be used to any great advantage. However, it is entirely possible that attempts may be made to do so, or that effective bacterial strains and methods of application might be developed.

### No "Non-Combatant" Doctors

In 1917 and 1918, the civilian physician could pretty much decide for himself whether to join the combat forces or to stay at home and enjoy the peace and comfort of pursuing his own and his patriotic *frater's* practice. Not so in the next conflict! Entirely irrespective of universal service laws, but decided by the very nature of combat according to the Douhet doctrine, the stay-at-home medico is likely to be rudely awakened in the middle of the night, not by the insistent tintinnabulation of his accustomed telephone, but by the crash of high explosive in the factories a few blocks from his peaceful domicile, and, while he struggles into his garments, aided by the horrid glare from phosphorus bombs across the park, to have his nostrils assailed by the stench of some new and lethal gas, intended to paralyze the entire industrial community in which he lives.

All physicians, no matter where located and in spite of their having done no practice for years, except in some absolutely unrelated specialty, will be likely to find themselves suddenly required to treat, not only wounds from flying missiles and falling debris, but also all sorts of gas casualties and even phosphorous and thermit burns. With the assistance of ambulance operators, police and fire departments, Boy Scouts, and the hospitals, they will have to organize their communities to endure such attacks with the best fortitude and to succor the inevitable injured with the utmost dispatch and efficiency. Those who have for years been favored with regular routine and office hours, will suddenly be transported back to their youth, with its attendant rude alarms and thrilling excitement of "emergencies."

In the small towns, even more than in the cities, the doctor, as the best-educated man and most natural leader in the community, will probably have the major responsibility for this organization. If our country is blessed with an adequate Air Force, including a medi-

cal department appropriately organized and equipped, he may have the help of a few air ambulances, to assist in moving casualties to an appropriate city or army hospital. The autogiro ambulances, advocated in *The Military Surgeon* of December, 1933, will be especially useful in such a problem, and they could also serve to tremendous advantage by quickly bringing to the assistance of the local doctor a generous reinforcement of army medical personnel.

From this it would appear that there will be no hard and fast line, such as existed twenty years ago, between the volunteer and the stay-at-home, but that it is entirely possible that the latter may have to bear the brunt of the campaign, while his confrere in the army may be enjoying sweet repose between mildly exhilarating skirmishes and his nautically inclined associate improves his mind and his outlook on life by a "personally conducted tour" around the world.

Naturally, there will be greater need of a special training when a so much larger proportion of the entire profession is likely to be involved in active military operations. The special schools established during the World War for the training of officers and enlisted specialists were legion. Next time there will be many more needed. The doctor who stays at home to take care of his own, and probably another's, practice will also have to manage somehow to squeeze in some training in the care of war wounds and gas poisoning.

From all this, it becomes apparent that the civilian doctor's part in a national military emergency will be very likely to be interesting and different, no matter whether his lot is cast with the fighting forces or at home. Those who join the colors or live in industrial and railroad centers will probably find it thrilling and perhaps dangerous as well. Most of them will have new things to learn and new talents to develop.

Knowing how the medical profession has always measured up to its responsibilities, we look upon the possibility of our country's need with a mixture of apprehension and confidence—apprehension because of the state of unpreparedness of the profession in the midst of the general unpreparedness of the entire nation, and confidence that, somehow, the civilian doctor's part in a national military emergency will be at least as well done as, and we think a little better than, that of any other group called from civil life to make up the great team.

36 S. State St.

# Inoperable Cancer of the Breast Removed with Zinc Chloride

## (A Case Report)

By C. W. Strobell, M.D., San Diego, Calif.

THIS demonstration was made on a ward patient at the San Diego County Hospital, on Dec. 22, 1930, by the courtesy of the then-acting superintendent, Dr. Ross Paull, and with the assistance of an intern, Dr. Ravenscroft, to both of whom I am deeply indebted. I am thus enabled, at this time, to present to the medical profession another striking result of the application of this technic to the removal of far-advanced, "inoperable" cancer of the breast, with metastases in the axillary lymph nodes and the pectoral muscles.

It is now more than four years since the operation was performed, and there is no evidence of local recurrence, either in the breast or axilla. Moreover, the patient is in good physical condition and leads an active life. The tissue covering the area operated upon, including the axilla, is soft and pliable and the arm movement is perfect. This case has been under observation, from time to time, by representative San Diego physicians, up to as recently as two months ago. It is still available for observation, in the interests of science.

The *case history* is as follows: Mrs. W., age 63, a resident of San Diego, 2-para, nursed both children. There was no previous history of cancer in her family. Mrs. W. had sustained a fall on her left breast some two years prior to her appearance at the Clinic. Six months after the accident, a lump had appeared in that breast and had steadily increased in size. She had not consulted a surgeon earlier, fearing to be told that it was cancer. Excruciating pain, however, had finally driven her to do so.

*Examination* disclosed a greatly enlarged, distorted and discolored left breast, which was displaced downward several inches (see Fig. 1). A cystic mass (hematoma) the size of a medium orange, with a breaking-down surface, occupied the upper and inner quadrant of the breast. The nipple area bulged, from cystic pressure, the nipple itself being flattened and somewhat depressed. The upper portion of the mass was more or less fixed to the chest wall. The breast, as a whole, presented an irregular, tense, necrotic appearance. The left axilla contained enlarged

lymph nodes. There was no supra- nor infraclavicular adenopathy. Fluoroscopy suggested lung metastasis. Clinical diagnosis (based on clinical history, metastasis, fixation to the chest wall, pain and malignant appearance), apparently very cellular, "inoperable" adeno-carcinoma of the left breast.

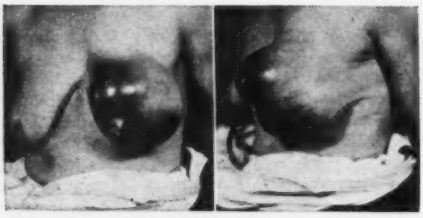

Fig. 1.—Anterior (left) and lateral views of the condition before treatment.

**Technic: Stage of Denudation**

In chemical removal of "inoperable" cancer of the breast, "H.M.C." (hyoscine, morphine and cactoid) narcosis is employed, but only in denudation and in skin grafting. It meets the conditions perfectly and is safest for these patients.

At 3 p.m., a full-strength (¼ grain of morphine) "H.M.C." tablet was administered hypodermically, and the room kept quiet and dark. At the end of exactly thirty minutes, a second similar dose was given, in the same way, the patient immediately thereafter being taken to the darkened operating room, placed upon the table, and perfect quiet maintained. The eyes were protected from light, the ears from noise, all necessary conversation soft-pedaled, and the handling of the patient, throughout, conducted with the utmost gentleness.

At 4 p.m., the area to be denuded, which included the axilla, was outlined by means of surgeon's adhesive plaster, which was used to cover the outlying skin surfaces. Pure phenol was applied to the uncovered area, after which the breast and axilla were denuded of skin, fat and fascia; the nipple structures removed; and the axilla cleared of lymph nodes and other involved tissues, by means of crayons of sodium hydroxide.

The denuded axilla, presenting a smooth glistening surface, through which the enlarged nodes could be palpated, was penetrated by the dissolving caustic crayon. Next, the opening thus made was widened laterally, by the same dissolving process, until sufficient access to the axilla was obtained (about 5 x 5 cm.) to facilitate retraction and enucleation, one by one, of the affected nodes. Accidentally severed small arterial branches were seized with hemostatic forceps.

Only movable glands should be removed in this manner; but the axillary nodes are movable in ninety percent of "inoperable" cancer of the breast cases, wherein there is no obstruction of the axillary vessels. The remaining ten percent have a swollen arm ("elephantiasis") and extensive metastases, requiring careful consideration as to how much can safely be done for them. The breast at least, in these cases, can always be removed, with relief from suffering and from the intolerable conditions surrounding these very extreme cases. It must never be forgotten that the chemical removal of "inoperable" cancer of the breast and the axillary nodes is a *surgeon's* job.

**Second Stage: Gross Removal of Breast Tissue**

All oozing having ceased and the denuded surface being, practically speaking, dry, the axillary wound (requiring no further chemicalization throughout) was isolated from that of the breast, by packing with moist absorbent gauze, secured in place with surgeon's adhesive plaster. The breast, to within an inch, all around, of its outer border (constituting a safety zone), was then covered with a fairly thin layer of finely-granular zinc chloride, and this covered with two thicknesses of moist gauze. Calcium sulphate was then freely spread over the gauze, and this, in turn, covered with moist absorbent cotton. A half-inch-thick rope of nearly-dry absorbent cotton, freely covered with sodium bicarbonate, was then coiled over the safety zone, at the base of the breast, to prevent zinc-charged serum from contacting the surrounding skin. Surgeon's adhesive straps, one inch wide by eighteen inches in length, were next applied, tent-wise, over the dressing, the free ends being fastened to the chest walls. This arrangement provided free access to the edges of the dressings, so that any disturbance could be "nipped in the bud." Zinc-charged serum, when escaping, usually does so at the outer and lower border of the dressing. Such seeping produces a sensation of discomfort, but is readily washed away with plain water, after which a small, almost-dry pledget of absorbent cotton is tucked under the edge of the dressing at this point, and occasionally renewed.

During the first week, the patient must have *constant oversight*, especially when changing position or when asleep, to see that seeping does not occur. The condition is easily recognized and as easily corrected. The reward is a comfortable patient. These are some of the more important features of the technic.

**Post-operative Progress**

The patient, still somnolent, was returned to the ward in good condition: Pulse, 62, soft and full; respiration, 14 per minute; skin, cool and moist. There was no nausea; she slept well, enjoyed her food the following morning and passed a comfortable day. Palli-

atives were not needed and she had a comfortable second night.

*Dec. 24:* On the morning of the third day, the dressings were taken off and devitalized tissues, to the amount of several ounces, removed. Thus, within thirty-six hours, the tumor mass was reduced to one-third of its original size. No narcotic had been required, efficient nursing being effective in keeping the patient comfortable. A fresh application of zinc chloride was made to the breast, and dressings applied exactly as before. The axilla was dressed with resin cerate.

*Dec. 25:* The patient passed a comfortable night, except for a contact with zinc-charged serum, which had escaped from under the dressings, across the safety zone at the lower border, and reached the normal skin. This, however, was soon remedied, as explained above. More devitalized tissue was removed and more zinc applied.

*Dec. 26:* Patient making good progress. A small amount of tissue was removed and a final application of the zinc was made, carefully gaged with regard to its "drive," so as to insure an intact pleura. The temperature had ranged from 99° to 102.5° F., the pulse and respiration fluctuating with its rise and fall. The semi-toxic condition, present upon admission, was clearing up; the color of the skin improving; and all was going well.

The chemical "drive" is controlled by the amount of zinc chloride placed upon the tissues, considering the depth to which it is necessary to have it penetrate. Obviously, this is a matter of training and judgment. Chemical surgery in inoperable cancer of the breast is chemical engineering, and requires instruction, so as not to "shoot beyond the mark." Each new case is a problem by itself.

The tissue, upon which the final zinc application is made, is left to nature's method of removal; i.e., demarcation and sphacelation. The result, when the field is cleared, is a clean, granulating area, ready for skin-grafting.

*Dec. 27:* Temperature, 100°F.; respirations, 18; pulse, 80. She had another good night. The axilla was freeing itself of devitalized tissue and closing in. The zinc dressing was removed and not renewed. The entire wound was thereafter dressed with resin cerate.

The third stage, or sphacelation, is characterized by a profuse, leukocytic exudate, which accompanies the separation of sloughing tissue. This clears the field of debris and leaves a finely-granulating surface, suitable either for cicitrazition or the application of Thiersch skin grafts. In this case, the former method was advisable, and the result proved satisfactory (see Fig. 2).

### Comment

Success in cancer surgery depends upon the removal of *every infected cell.* In the present state of our knowledge, the chemical or zinc chloride technic of removal of "inoperable" cancer of the breast appears to be the one resource upon which reliance can be placed, to rescue this particular class of patients from the misery in store for them. The fact is that it *works*—it accomplishes what no other present method does. It deserves to be investigated with an open mind, for who yet knows the latent therapeutic possibilities of zinc chloride in the field of cancer surgery, when thus scientifically applied?

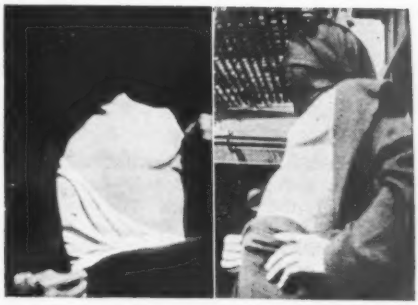

Fig. 2.—Anterior and lateral views, showing result of treatment.

The chemical method has merit, in that zinc chloride has the power to penetrate animal tissue, to a depth of from two to three centimeters, the first centimeter being destroyed; the second, inflamed; the third, mildly permeated. Normal tissues in the second and third centimeter recover, while cells of a low degree of vitality, such as cancer cells, perish.

Observe the penetration of zinc chloride into animal tissue. Sprinkle powdered ZnCl on the surface of a two-inch block of fresh beef, and examine it from time to time during the ensuing twenty-four hours. Uncontrolled penetration of zinc chloride into animal tissue may thus be demonstrated.

*Caution:* Considering the near proximity of the pleural cavity to the base of the breast, it is obvious that preliminary instruction, in control of the chemical "drive," is essential. Equally so is the knowledge of the technic of chemical enucleation of axillary nodes.

The chemical removal of far-advanced, "inoperable" cancer of the breast should, in all such cases, be resorted to at the earliest possible moment, to possibly forestall metastasis. The chemical operation has proved itself safely applicable at any age and at almost every stage of the disease.

An analysis of 80 cases thus treated has been published* and is available, together with the bibliography.

520 E St.

**Glendale Medical Herald,* Glendale, Cal., August, 1931.

# The Relation of the Adrenal System to Infections and Infectious Diseases

By Henry R. Harrower, M.D., Glendale, California

THE chemical regulation of the body function is accomplished largely through the agency of the hormones. The endocrine glands direct; the body responds. Growth, development, metabolism, detoxication, mentality, temperament, reproduction, all are subtly controlled by these astonishing, and as yet unnumbered, active principles. So, too, are the defenses, especially the defenses against infection.

For years it has been noticed by clinicians that the thyroid exerts a mysterious influence upon the antibacterial powers of the skin, and conditions of thyroid insufficiency are commonly accompanied by dermatoses. That the pancreas also plays a part in the control of infection was emphasized by me more than twenty-one years ago (*Practitioner*, 1913, xci, p. 289), and for many years the susceptibility of the diabetic to carbuncle, gangrene and other infective processes has been well known. Experimental pancreatectomy, which was so frequently done in the basic experimental work in the study of diabetes, was renowned for the interference caused by severe and even fatal infections.

The spleen is a vital part of the anti-infective mechanism of the body, and the recently appreciated antibody-producing reticulo-endothelial system is now conceded to consist chiefly of the spleen and allied lymphatic organs and cells. At least, the bulk of the socalled lysinogenic cells are found in the spleen, and as our knowledge of immunity is perfected we find the rôle that the spleen plays in the defensive efforts of the organism far more important than any of its other suggested services, such as "the graveyard of the red blood-cells," the control of the iron reserve, the source of white blood-cells, etc. Incidentally, this subject also was considered by the present writer as far back as 1913 ("The Therapeutic Action of Splenic Extract and Its Application in the Treatment of Tuberculosis," *Lancet*, 1913, i, p. 524).

However important these endocrine defenses may be, it is the intention here to direct attention to the adrenal glands and to stress their importance in the defense scheme. Though the detoxicative efficacy of these glands is undoubted and their musculotonic influence is transcendent, it may be that their defensive value is fully as great.

The thesis of this paper is that the adrenal cortex hormone acts as a catalyst to the functions of the agencies concerned with the antibacterial defenses; that its position in this respect is more important than that of the organs it is believed to influence, if only because the adrenals play another and equally vital rôle.

The justly famous C. E. de M. Sajous named a definite form of adrenal insufficiency "terminal hypoadrenia," which, as he puts it ("The Internal Secretions and the Principles of Medicine," 9th Ed., Vol. 1, p. 109), "is an adrenal syndrome, occurring late in the course of an acute febrile disease as a result of the exhausting secretory activity, probably aggravated by temporary local lesions to which the adrenals are subjected as defense organs, during the febrile period of the disease . . . The adrenals being admittedly concerned in the protection of the organism during infections and intoxications, by contributing an excess of their secretion during the febrile stage of the disease, it follows that after this stage is over the adrenals should lapse into a condition of more or less temporary insufficiency, through fatigue or exhaustion."

### Adrenal Support

Let us consider some personal experiences and history that will lead up to our present conception of this matter:

In 1918, a formula that I had been using was made available in a general way under the name, Adreno-Spermin. Shortly after the founding of The Harrower Laboratory, we encountered one of the severest epidemics that ever struck the world—the great influenza pandemic of 1918. Those who were in practice then will recall how extremely frequent hypoadrenia was, although at that time only a very small proportion of the profession appreciated the essentially adrenal background of the tremendous postinfluenzal depletion. However, occasionally a physician, not knowing what else to do, would attempt to modify this condition with Adreno-Spermin. In that way the philosophy of organotherapy as a means of controlling other than the definite endocrine diseases, and the importance of adrenal support in depleted, run-down states were driven home, sometimes in a most spectacular way.

When the influenza epidemic was over, there was an epidemic of articles on the many phases of the subject, and a noticeable number of clinical and pathologic reports showed that our empiric appreciation of the adrenal aspect of the matter was rational. A number of autopsy reports showed how uniform and extensive were the changes in the adrenals in patients dying from influenza and other acute febrile infections. For example, from Camp

Zachary Taylor came a series of pathologic studies by B. Lucke, T. Wight, and E. Kime (*Arch. Int. Med.*, Aug., 1919, xxiv, p. 154), on 126 soldiers dying from influenza. In only twenty were there no changes in the adrenals visible to the naked eye. Eighty-five percent had obvious adrenal lesions.

More recently, A. S. Blumgarten (*Internat. Clin.*, 1931, iv, 31s, p. 1) finds that the adrenal phase of the involvement in pneumonia, typhoid, and other acute infections is evidenced by such clinical findings as tympanities, asthenia, exhaustion and low blood-pressure. He details five case histories in which adrenal injury is claimed to be clearly demonstrated during the course of infection; there is hypofunction, with asthenia, hypotension and abdominal distension, indicating sympathetic paralysis, and Sergent's white line. In postinfectious adrenal insufficiency with neurasthenia, thyroid hyperactivity and vagotonic gastric symptoms, small doses of reliable adrenal preparations, the use of alkalies, and careful dieting are claimed, by Blumgarten, to be of great service.

When the differentiation between the adrenal medulla and the adrenal cortex led to the perfection of the cortex hormone, these facts were confirmed, and in concluding an article entitled "The Adrenal Cortex Hormone and the Renaissance of Adrenal Therapy" (CLIN. MED. AND SURG., Jan., 1931, xxxviii, p. 14), I stated: "Finally, it is a remarkable coincidence that virtually all cats adrenalectomized and used as controls in the research work upon which these findings are based, during the comparatively short period that they lived, developed ulceration of the stomach, duodenum, ileum or colon. So far, no work of which I have knowledge has been done to cultivate the germ of the therapeutic possibilities that this opens up."

Through the years, the importance of functional adrenal insufficiency has become more and more apparent, until now it is generally conceded, and the criticisms of those who did not believe in it are in the past. However, practically all those who have considered the subject have presumed that the infections or infectious diseases deplete the adrenals through the associated toxemia; that is, the febrile and other poisons overstimulate the adrenals and thus play them out. I think there is another and more direct aspect of this matter.

Every physician who has become well acquainted with this subject will recall cases in which a comparatively insignificant infection has caused an extremely serious hypoadrenal sequence. In fact, the sequelae often develop into a more serious problem than the original disease. This is particularly true in influenza, the explanation being "individual susceptibility." In other words, persons whose adrenals have previously been depleted or who possess a hypoadrenal tendency have a reduced adrenal reserve. The resilience of this mechanism does not suffice, and the depletion is out of proportion to the apparent extent of the toxemia.

### Antibody Stimulation

Parallel with our consideration of the importance of the endocrines in their relation to the defenses of the body, there has been developed a method of treating infections that has illuminated this subject quite decidedly. The advent of Edwenil, an essentially organotherapeutic product, by the way (it is made from blood-serum and muscle extract), has directed attention to the reticulo-endothelial system, which is conceded to be the source of antibodies and bacteriolytic substances produced in the course of the defense reaction against certain infections. This system of cells includes several structures that heretofore have been considered as glands of internal secretion. In fact, the bulk of the reticulo-endothelial system is made up of the spleen and lymphatic glands, although these do not by any means represent the entire widely scattered mechanism.

One of the noticeable features has to do with the incidence of sequelae in patients receiving this treatment. A patient with pneumonia, successfully treated with Edwenil, recuperates very much more rapidly and the postfebrile hypoadrenia is minimized. The use of Edwenil in chronic infections, for example an old bronchitis or prostatitis, is sometimes followed by a general improvement that seems like the response to adrenal support. In other words, there seems to be an adrenal phase to the response to stimulation of the reticulo-endothelial system.

Again, in the treatment of the acute infectious diseases of children, particularly measles and whooping cough, where the most serious features of these diseases are really the sequelae (especially the cardiovascular developments), a series of cases treated with Edwenil confirms this same endocrine-sparing effect by a noteworthy rarity of sequelae. For instance, I recall a series of nearly a hundred cases of measles treated with Edwenil, without one case of bronchopneumonia; whereas, in the same epidemic, nearly 20 percent of the same number of children, considered as controls, developed pneumonia or near-pneumonia, and several of them died.

W. F. Wenner later applied the adrenal therapy idea in a clinical way and quite recently reports (with A. J. Cone, *Arch. Otolaryngol.*, Aug., 1934, xx, p. 178) the results of adrenal cortex therapy in twenty-eight cases with pyogenic infections of the upper respiratory tract, chiefly acute sinusitis. This therapy was effective in many such simple cases, though in true mastoiditis the cortical extract did not alter the necessity for opera-

tion, though it is believed that such treatment improved the postoperative course. When the infection was accompanied by fever, the adrenal therapy tended to reduce the temperature.

Some very interesting developments regarding the relation between the adrenal cortex and the defenses, and our capacity to modify both these functions by the use of the adrenal cortex product, Adreno-Cortin, on the one hand, and by the antibody-stimulating product, Edwenil, on the other, seem to be just around the corner. And, of course, it will be well to have all the experimental confirmation possible.

Another clinical paper by R. W. Whitehead and C. Smith records five clinical experiences, "The Effect of Adrenal Cortex Extract on the Course of Certain Human Infections," (*Proc. Soc. Exp. Biol. and Med.*, 1932, xxix, p. 672). These preliminary cases included typhoid fever, undulant fever, erysipelas, lymphangitis and sinusitis. In all there was prompt subjective improvement and the authors find that "the results are suggestive and tend to confirm our assumption that cortical adrenal extract might have some action in increasing the resistance of the human body to bacterial intoxication."

The conclusions that it is desired to set down here have come as the result of long years of study of adrenal insufficiency and infection, as well as a study of quite an extensive literature. It has been found that the adrenal glands are actually a part of the body's defense against infection, and that adrenal function and that of the intimately related glands are stirred to the uttermost in the course of an acute infection, with the result that adrenal depletion is a customary concomitant of bacterial invasions and toxemias. This conclusion does not vitiate our previous impression, that the toxemia of a disease exerts an endocrine-depleting influence, nor does it nullify the idea already mentioned that adrenal depletion occurs with greater frequency and to a greater degree in persons whose adrenal resilience is below normal.

**Conclusions**

With the foregoing clinical and a large number of experimental findings in review, I think it justifiable to conclude that:

1.—The adrenal cortex is a part of the antibacterial defense mechanism, and is especially active in connection with the defense reactions against infection, particularly fever.

2.—Adrenal cortex insufficiency is an expected development in all such cases, its extent depending, not only upon the immediate stress, but also upon what has been called "endocrine resilience," which, in turn, is based upon previous infections, toxemias, dyscrinisms, etc.

3.—Adrenal support is in order as early as possible in all adrenal-stressing infections. Such therapy can be utilized advantageously early in the course of such experiences, before the ultimate syndrome of hypoadrenia is evident.

4.—Antibody-stimulating measures exert an adrenal-sparing influence. This explains the rapidity of convalescence following acute infections and infectious diseases treated with Edwenil, and the infrequency of serious sequelae in such circumstances.

5.—Infections in persons who already have a well-defined hypoadrenia are more likely to respond promptly to the encouragement of the reticulo-endothelial system by means of Edwenil, in view of the fact that such treatment acts directly, whereas adrenal support necessarily has to exert its influence indirectly and will be beneficial chiefly in proportion to the capacity of the patient's adrenal mechanism to respond to this homostimulation.

6.—Finally, in acute infections, Adreno-Cortin supplements the direct anti-infective influence of Edwenil. Both shorten the course of the disease and minimize untoward developments. In chronic infections, each method supplements the other, the Edwenil sparing the already depleted adrenals and the Adreno-Cortin encouraging the adrenal mechanism, and, through its effects, the other endocrines and the reticulo-endothelial cells.

920 E. Broadway.

## SCIENCE OF THE SOUL

*The theorizing of men as to their divine nature must shortly give place to conviction and their philosophizing to direct investigation of the soul. That which is recognized and admitted, even if not understood, is the object of attention and investigation, and the day will dawn before so very long when an experimental science of the soul will have its place in the universities and public endowments; and not the proving of the soul, but an analysis of its nature, purposes and life will receive an attention equal to that now given by modern scientists in their varying branches to the mechanism which the soul seeks to use and eventually will use.*—ALICE A. BAILEY.

# PHYSICAL THERAPY AND RADIOLOGY

ASSOCIATE EDITORS

FOR PHYSICAL THERAPY
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JOSEPH E. G. WADDINGTON, M.D., C.M.

FOR RADIOLOGY
HENRY SCHMITZ, M.D., F.A.C.S., F.A.C.R.
WILBUR H. GILMORE, M.D.

## The Great Consultant: Doctor Blood

IT is a medical axiom that the body puts up a continuous fight with its environment, both physical and biologic. The result of this struggle may be a complete triumph, and the patient recovers completely; or the body may be vanquished and the patient dies; or a truce may result, with neither side triumphant and the parties to the conflict existing in a relation of armed neutrality.

Recovery is due, of course, to the innate recuperative powers of the body. Were they always at an optimum, recovery would be one hundred percent.

We are always admonished by our medical teachers to treat the patient. Manifestly this means, raise the patient's powers of resistance. The source of resistance lies in an adequate supply of normal blood, containing autoantitoxins and nutriment, as well as adequate removal of wastes by the blood.

No form of treatment, therefore, can be considered appropriate or adequate if it does not primarily seek to produce an active hyperemia in the diseased tissues and to maintain a nourishing state of the blood. The phenomena of general fever and local inflammation assure us that this is nature's own method of defense.

To remove the cause or attenuate the pathogen, by mechanical or chemical means, takes second place in our mode of attack, and excision of the diseased tissue and throwing it away is but a confession of therapeutic failure.

Our methods, then, consist of securing good blood by proper diet and the use of those alterative drugs such as the iodides, mercury, quinine and the thyroid preparations; increasing leukocytosis by intravenous hydrochloric acid injections; and then seeing that this improved blood is delivered in adequate quantity to the diseased tissues. This is done by the various conversive heat agencies—diathermy, radiothermy and photothermy—and in some cases by rhythmic aerostatic pressure. Mechanical and chemical attack on the exciting cause play a minor rôle in the results, and excision of a diseased tissue is a last resort, which cures nothing.

Clinical reports bring constant attestation to the increasing trend in the direction above indicated. The vanquishing of neural syphilis, of pelvic and arthritic gonococcal infections, of empyema, of pneumonia, of sinusitis and of mastoiditis, of carbuncle and furuncle, and of many other infections, without local manipulation or surgery, but simply by the production of increased hyperemia with physical agents, is reported daily. We may look forward to new triumphs in therapeutics, because of the increasing prevalence of calling in consultation the great physician, Dr. Blood.

F. T. W.

# Electrodiagnosis in Otitis Media

OTITIS media is a treacherous disease. Children up to the age of five years, or even to adolescence, are more often afflicted with this disease than at advanced ages. The etiology is of wide scope, as it is a sequel of many infectious diseases.

During the prodromal period of otitis media in children it is very difficult to locate definitely whether the pain is in the tympanum or in the mastoid or both. It might be considered as an ordinary headache, resulting from a cold or some other trivial cause. The diagnosis cannot be made early with any certainty, in many cases, and it is an excellent idea to test these children with the Micro-Dynameter. This instrument will positively register if there is any congestion developing. If the test shows positive, we have otitis media to contend with, and every human effort should be made, therapeutically, to arrest the spread of the disease. If this is futile the critical time is at hand, for if pain is severe, temperature high and there is evidence of bulging of the drum of the ear, it is only a question of 24 to 36 hours when a paracentesis must be done to prevent the infection from invading the mastoid.

As a rule, two or three weeks will be required for the discharge to stop unless there is tuberculosis or diabetes or some other constitutional defect; then it may continue for several months. The middle ear is the focus for the infection and the *Streptococcus hemolyticus* is the most virulent and difficult to eradicate. These infections have a rapid activation and must be conquered during incipience, before the physical integrity of the child is endangered by toxemia.

The tuberculin test should not be neglected, as the potential latency of tubercle bacilli is well understood. The tympanum is an open cavity and the source of the bacteria entering the mastoid, so it is all-important to keep the sinuses and pharynx sterile, or at least free of pathogenic germs.

Granting that the child has made a good recovery and is apparently clinically well, it is still questionable if there are no bacteria lurking in the middle ear, ready to extend their ravages to the mastoid, causing a severe mastoiditis. Again, this can be determined promptly and accurately only by the Micro-Dynameter. If there is a positive registration, treatment must be instituted to control the infection and avoid mastoid trouble. When a mastoid operation becomes obligatory, it is very serious and entails expense and suffering, as well as a possible mortality of from fifteen to fifty percent, depending on the qualifications of the surgeon and the constitution of the patient. The Micro-Dynameter can be used to test the process of infection in the mastoid before any actual lesion has developed, and even before the x-rays can be brought to bear upon this intractable disease.

This instrument is a recent invention and, while much has been written against it, if it should never serve any other purpose than as an aid to children in this disease, it would have crowned the inventor, for his untiring efforts, with no little glory. However, it will do more in its particular sphere of usefulness, in diagnosing practically all obscure diseases and in settling many differences in opinion among physicians.

S. M. JANES, M.D.

Marquette, Mich.

## Physical Therapy from the Standpoint of the Internist*

THE internist may divide his treatment problems into different groups: first, those in which physical therapy is essential (still generally considered a small group); second, those in which physical therapy may be helpful (quite a large group); and third, those in which physical therapy is based upon doubtful premises and is therefore highly controversial.

Of the first group, chronic arthritis, with its kindred disturbances, stands out conspicuously. In the deliberations of special groups for the study of arthritis, on the continent of Europe, in Great Britain and in this country, it is intriguing to note, on the one hand, the confusion and debate concerning the importance of focal infections, of vaccine therapy or of dietotherapy, and on the other hand, the unanimity of opinion that, at some stage of the disease, physical therapy is essential. In the many types of neuro-muscular disorders, where rehabilitation is practicable, physical therapy holds a commanding position.

It seems to me that it is in the second group, in which physical therapy may serve as a more or less useful adjunct to other methods of treatment, that we have the greatest promise of possible future benefit to internal medicine. In many chronic states the stimulating physical agencies may be used for their tonic effect, and there are favorable reports, in increasing numbers, of the use of physical agents in the treatment of acute conditions. Hydrotherapy has long been used in the management of acute febrile states. In my own personal experience of many years ago, I remember well the relatively delightful feeling of the cold sponge during the malarial paroxysm.

We note the widespread use of diathermy

*Archiv. Phys. Ther., X-ray, Radium*, Dec., 1934.

in the treatment of pneumonia, for the relief of pain if for nothing else, the employment of the ultraviolet rays in erysipelas, and the more recent adaptation of the ultra-short wave diathermy in the treatment of deep seated abscesses, even in the viscera and in the body cavities.

THOMAS P. SPRUNT, M.D.

Baltimore, Md.

## Interlobar Pleural Exudates

ROENTGENOLOGICALLY, interlobar pleural exudates are frequently mistaken for mild or atypical pneumonic processes with delayed resolution, unless a true lateral view of the chest is taken. In contradistinction to pulmonary consolidation, there are practically no abnormal physical manifestions.—"Radiologic Maxims," in *Radiological Review*, Jan., 1935.

I want to congratulate you on the high standard of CLIN. MED. & SURG., not only in the contributed articles, but in the ethical class of advertising.—G. M. E., M.D., Colo.

## New Method of Diathermic Electrocoagulation*

THIS method of coagulation with a diathermic apparatus of mild short waves is, in my opinion, more simple and sure than those generally used.

The operator and the patient, completely dressed, are seated on a common seat, on metal plates which are connected with the outlet conductors of the diathermic apparatus. The high-frequency current flows through these two persons each time they touch each other, the intensity increasing with the repetition of the contact. If contact is effected by means of a metal point, electrocoagulation results. This point should be mounted on a metal handle, which the operator holds in his hands without insulating it. Since it is necessary to keep the hand from touching the skin, a dry compress is interposed.

The operator uses this stylocoagulator with the same ease that a painter uses his brush for coloring his canvas, either at definite points or over surfaces. A pedal regulator permits control of the dose without distraction of the operator's attention. The entire person consitutes an electrode, and the coagulation is very superficial and the scars almost invisible.

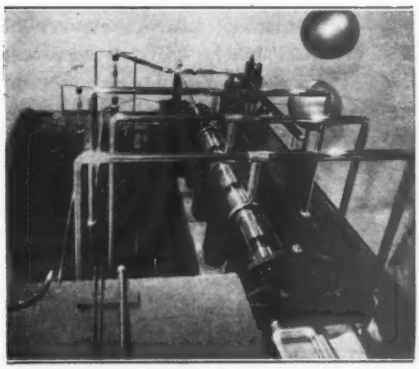
Sensitiveness to pain is less than in all other methods, and coagulation is rapid, in spite of unpopularity, even with an apparatus of low power, which renders anesthesia unnecessary. The participation in the procedure of the operator, who is electrically in a position symmetrical with the patient, gives to the latter a maximum of confidence, which aids in bringing about the best results. This symmetry is responsible for the term "balanced," which has been applied to the new method.

FELICE MARTA, M.D.

Milan, Italy.

*Med. Rec., Nov. 21, 1934.

# NEWS



Courtesy of General Electric X-Ray Corporation.

## 800,000 Volt X-Ray Machine in Seattle

THE Swedish Hospital in Seattle, Wash., has recently installed one of the most modern and powerful x-ray machines in the country. It is loosely spoken of as a "million-volt machine," but actually operates at about 800,000 volts and produces radiations equal to those from $75,000,000 worth of radium. The size of the giant tube, which is housed in a special building and is pictured above, may be judged by comparing it with that of the man who can be seen (if one looks closely) at the left side of the picture.

## New Radio-Opaque Medium

COLLOIDAL thorium hydroxide, under the name of Thorad, is mentioned in *Victor News* for January, 1935. It has a pH of 6.0 and coagulates in the presence of dilute alkalies or mucous, leaving a radio-opaque film which remains in place sufficiently long to make roentgenograms of the uterine cavity, bladder and urethra. It is thin enough to be drawn through a small canula.

# PROCTOLOGY

ASSOCIATE EDITOR

WILLIAM A. HINCKLE, M.D., Peoria, Ill.

## Dr. William A. Hinckle

WILLIAM ALBERT HINCKLE was born near Springfield, Illinois, February 29, 1876. The fact that he has a birthday only once in four years probably accounts for his youthful outlook and enthusiasm for his professional work.

After finishing high school he entered the Illinois State Normal University, to prepare himself for teaching; but before his graduation he had begun to see visions of larger worlds to conquer, so his formal career as a teacher was abortive. His pedagogic training, however, makes a splendid background for the work he will do as Associate Editor for this Department.

In 1903 he received his degree as a Doctor of Medicine from Hahnemann Medical College, Chicago, and immediately began his professional career in Peoria, Ill., where he has practiced ever since—first as a general clinician, especially interested in proctology, and for the past ten years as a specialist in diseases of the rectum and colon.

Dr. Hinckle is a fellow of the American Medical Association, a member of its constituent societies and a past-president of the Peoria City Medical Society. He has always been active in Organized Medicine. He is also proctologist to the Peoria State Hospital for the Insane, in addition to his large private and consulting practice.

Nor are Dr. Hinckle's interests confined to the technical aspects of medical practice. He has, for some years, been a helpful writer and speaker on economic and sociologic subjects and is the author of a book, "The Evolution of Religion," which is in its second edition.

We feel sure that, in the conduct of this new Department, Dr. Hinckle will bring real and practical help to our readers in the development of satisfying and remunerative additions to their present practices; especially in view of the fact that he has expressed a willingness to give them direct and personal help in their individual problems.

We welcome him to our editorial staff and bespeak for him the hearty good will and cooperation of all our readers.

G. B. L.

# Why a Department of Proctology?

THERE are few, if any, other parts of the human body to which the profession as a whole has devoted so little time and attention as to the anus, rectum and colon. As a result, diseases of these organs have, for the most part, been inadequately treated or have been neglected altogether. Only in the past quarter-century has any considerable number of physicians paid special attention to these disorders. Even now, the number of adequately trained proctologists is far short of the demand.

It is not the purpose of this Department to make proctologists while you wait. A proctologist can no more be made over night than can a gynecologist, neurologist, urologist, or any other kind of ologist or worth-while specialist.

Proctology is now suffering from the same growing pains experienced in the past by other specialties. There is, as yet, no standard of qualifications to which one must attain before posing as a specialist. As a result, we have both fit and unfit persons practicing proctology.

That many are now trying to practice proctology who are not qualified, will hardly be denied by anyone conversant with the facts. Many such are here, and doubtless will continue to be with us. What should be done about it? Obviously, if they cannot be eliminated, they should, if possible, be made more efficient. It is to the interest of both the profession and the patient that as much proctologic pabulum be made available to them as they can, or will, assimilate. Perhaps this Department can help a little to attain this end.

Even those proctologists who are best qualified, realize their limitations and often feel the need of a medium for the exchange of ideas. They also occasionally feel, or should feel, the altruistic urge to pass on to others those things which they have found of value in their own practice. In these uncertain times, when subtle and subversive forces are sapping at the foundations of our profession, it is imperative that all should cooperate for the improvement of our faith and practice. Perhaps this Department can help a little in this direction.

In assuming the responsibility for a Department of Proctology in CLINICAL MEDICINE AND SURGERY, I do so with no sense of proctologic superiority. On the contrary, knowing my own limitations, I hope to receive from such endeavor far more than I can possibly contribute.

The Department, as planned, will be devoted largely to reviewing and abstracting proctologic literature. Many articles of value to the proctologist are continually appearing in various medical magazines. They are, however, scattered through such a large number of different publications that it is not practical for any one physician to take all of them. It will be my purpose and pleasure, as far as is possible, to cull, review and abstract this literature to make it available and valuable to both the proctologist and physician generally.

In such reviews and abstracts I shall endeavor to give a fair and unbiased statement of what the author is trying to convey. Bigoted criticism of everything and everybody with whom the author disagrees has no place in a scientific medical magazine.

In addition to such abstracts and reviews, we expect to present every month one original article, dealing with some phase of proctology. It is hoped to have these articles contributed by men of standing and understanding. For the good of all, it is hoped that the Editor of the Department will not have to fill the breach too often.

Often many valuable truths may be condensed into a paragraph or two. In fact, one can often say more in a paragraph than in a whole page, and say it better. With the help of our readers, we hope to present many such practical proctologic paragraphs, dealing with important big and little things in practice.

Insofar as is practicable, we hope to make this Department your forum for the presentation of your ideas and the discussion of your problems.

With this aim, and in this spirit, was this Department of Proctology conceived and given birth. With your assistance, we will make it a living, growing spirit of mutual helpfulness. To that end, I crave your advice, criticism and contributions. Criticize as much as you like, but send a contribution with your criticism. It is more blessed to give than to receive.

WILLIAM A. HINCKLE, M.D.

# Chronic Ulcerative Colitis

By M. H. Streicher, M.D., Chicago
Department of Surgery, Grant Hospital

THE subject of chronic ulcerative colitis has been a "public playground," so to speak, for all concerned—just a handful of gastro-enterologists and proctologists presenting the opinions of their work, while many others are recklessly and discouragingly criticizing their work. I realize that it is not possible for all to do the same type of work or to be interested in the same subject, but this condition certainly should stimulate more investigations along the line of various physiologic processes and post-mortem studies.

There is doubt in my mind that the absolute etiologic factor is at hand, except in a general way; by that I mean that, while the work of several investigators, including my own, may have shown that the causation is an infectious process, I still am dubious about the lone organism that may be specifically responsible for this infectious process.

There are, mainly, two views that are known to the literature on the bacteriologic phase of the etiology of chronic ulcerative colitis: (1) That the bacillus of Bargen (diplostreptococcus) is the specific cause of the process; and my own opinion (2) that the combination of bacteria found in the colon of these cases, including the diplostreptococcus, is the cause of chronic ulcerative colitis.

There is, of course, the general opinion among some physicians that, inasmuch as no specific knowledge is available at present as to the etiology, it may just as well be called non-specific and be forgotten. It would be more encouraging to have more physicians get into this problem, to help solve the basic essentials of this infectious process.

### Diagnosis

Certainly we are more fortunate in the methods of diagnosis in this disease which, essentially, is diagnosed by two main methods: (1) *Colon* (barium enema); and (2) *proctoscopic* examination.

The x-ray studies of these cases are of great help. The colon shows: (1) Absence of colonic sacculation (haustra coli), so that it resembles a lead pipe; (2) It is shorter in length and exaggerated in diameter thickness; and (3) ileocecal incompetency is present. Of course, these findings are found in the colon of other types of ulcerative lesions.

On *proctoscopic* view the involved portion of the colon shows multiple linear ulcerations, considerable edema and pus and, upon slight manipulation or irritation, the mucosa bleeds readily. Many of these colons have a moderate constriction of the lumen, apparently due to the associated edema and chronic irritation.

It is my opinion that, while it is important to have bacteriologic confirmation of the organism present in the colon at any one time, it is not essential, inasmuch as one who has had considerable proctologic experience would be in position to recognize this condition without bacteriologic confirmation.

There is one point to which I wish to refer in the differential diagnosis of these cases proctoscopically. In a general way, the proctologist understands that chronic ulcerative colitis presents many linear ulcerations, while amebic colitis cases present singular transverse ulcerations in the colon. The confusion comes about because amebic colitis is often mistaken for chronic ulcerative colitis (in the absence of stools positive for ameba). I have met with this observation, as others have, many times, and it is my impression that very often amebic colons become infected, superimposedly, by the usual organisms that prevail under such circumstances and, for that reason, the essential picture of amebic colitis is masked. This is well brought out in response to treatment that such cases show. For example, when a case with a stool, negative for ova or parasites, is observed proctoscopically, the colon may not show the essential signs of amebic colitis, so that, proctoscopically, this type of colon may well fit in with the picture we observe in a chronic ulcerative colon of non-specific origin.

One may readily be influenced in the type of treatment one chooses, if one empirically outlines treatment solely on the proctoscopic diagnosis. The impression I am trying to convey is that, for all practical purposes, when one meets with that type of case one should treat it as though it were a chronic ulcerative colitis, and later institute the usual regime for amebic colitis, regardless of the stools negative for ova or parasites.

I am sure we all have had the experience of treating ulcerative colon conditions, with negative stools, that resist specific treatment. It is very likely that, in the past, many cases that were treated as chronic ulcerative colitis were cases of amebic colitis, but were not treated as such because of the comparative infrequency of amebic cases known to the profession previous to the recent epidemic in the Midwest.

There is one other pitfall in the differential diagnosis of ulcerated colons, made proctoscopically. There is a condition observed at times proctoscopically, which may simulate the picture of ulcerative colitis but parallels the appearance of early polyposis or an acute granuloma of amebic dysentery. By careful study of such cases, over a period of several years, one learns not to make a hasty diagnosis. Very often this type of a proctoscopic picture is one of *tuberculosis of the colon*, of the hyperplastic type. There are other complicated combinations of lesions of the colon, of the ulcerative variety, with which the proctologist meets. All these must be differentiated from the chronic ulcerative colitis of bacterial origin.

**Treatment**

At present I am of the same opinion, on the treatment of chronic ulcerative colitis which is not due to specific causes, as I was ten years ago. Since 1925 I have examined about 5,300 cases proctoscopically, of which 319 were chronic ulcerative colitis. Of these, 103 cases were in private and 216 in clinic patients. Against my better judgment, I operated upon two patients—cases that were badly mistreated, misguided and sadly neglected. The mortality would be the same in these cases regardless of any choice of treatment.

Out of the 319 cases treated, 11 died without surgery and 2 died following surgery. I am definitely and absolutely opposed to surgical treatment in chronic ulcerative colitis.

Recently, a strong plea for radical surgery was made, in a paper read at Cleveland and published in the *J. A. M. A.*, January 12, 1935. In the analysis of that article and its discussion one comes to the conclusion that: (1) A young adult must face a permanent ileostomy or colostomy, with little or no chance for reestablishing a natural fecal course; (2) the patient is practically excluded from all phases of social life and must face economic embarrassment; (3) the mortality in that type of treatment is well over 25 percent.

Now contrast this mortality rate with a rate of 3.4 percent, or 11 deaths out of 319 cases, without surgical interference, over a ten-year period. I know where my choice would be, and I am sure that many others have the same thought on the matter.

The one thing that Dr. Catell's article (*J. A. M. A.*, January 12, 1935, page 104) will accomplish will be to put the physician on guard against radical surgery in chronic ulcerative colitis. It is dangerous to preach radical surgery in such cases to the younger men in the medical profession. I shall continue to teach against it, as others are doing. I admit that it is a battle, and a long, tedious battle, to treat these cases conservatively, but the patient's chances are best by this method. I would, by preference, see a conservative mortality of 3.4 percent, rather than a radical mortality of 25 percent. I still firmly believe that rest in bed, diet, vaccines, serums, administrations of chlorides for dehydration, transfusions and all other necessary methods and medications constitute the management of choice, at this time, for chronic ulcerative colitis not of specific origin.

In the general consideration of the treatment of ulcerative lesions of the colon, one should understand that all cases under treatment will fall into two groups: (1) A larger group, which is amenable to the average good medical management; and (2) a small group, which resists, not only the average good management, but also the best management possible.

This smaller group, which resists treatment of any kind, very often terminates at the post-mortem table by the conservative route, and very often a specific etiologic factor is determined—a factor which may have been suspected ante-mortem, but could not be determined or treated adequately, either because the patient presented himself too late or because no treatment is known for that particular condition or because no information leading to that suspicion was available.

My idea of the treatment of these difficult cases is one of caution, persistence and painstaking guidance of the patient, from week to week until recovery. One must accept setbacks, remissions and certain complications without giving alarm to the patient; one must treat the cases on the law of probability; and one must assure the patient that the treatment outlined is the one of choice and that no treatment is to be attempted other than the most conservative.

I am sincerely looking forward to the time when more is known about these cases and hope, until then, to remain on the safe side without resorting to extreme radical measures. It seems so simple a task to advise a colostomy or ileostomy for the other fellow! Except in carcinoma of the colon or rectum, I would, by preference, see a patient dead without a colostomy, rather than alive with one. I know I am sincere in my opinion because I have watched with interest the patients upon whom I have performed a colostomy for carcinoma of the colon or rectum. These patients, with few exceptions, are utterly disgusted with their fate and most of them hope for a speedy termination of their destiny.

Comparing the length of time a colostomy is carried, in an average case of carcinoma of the colon or rectum, against the length of time it may be carried in chronic ulcerative colitis, one readily sees a patient who is existing against his own desire to go on; and this is a very mild picture of the situation!

307 No. Michigan Blvd.

# NOTES AND ABSTRACTS

## High Rectal Pain*

BUIE and Brust, of the Mayo Clinic, give their findings in 100 cases of high rectal pain. Most of these patients complained of various degrees of discomfort up in the rectum, in a location often described as about a finger's length from the outside. A careful examination failed to disclose any anal or rectal conditions which could account for the discomfort in 71 of the 100 cases. Of these 71, there seemed reasons for classifying 52 as due to some form of neurosis, neuralgia or nervous exhaustion. The other 19 could not be placed in these catagories and so had to be classed as of unknown origin.

The remaining 29 cases were due to various systematic causes and to associated pathoses in adjacent organs. Eight (8) of the 29 cases were due to tabetic rectal crises; 5 were due to radium proctitis; 6 to prostatic disease; 1 to coccygodynia; 2 to sacrococcygeal arthritis; 3 to pelvic tumors; 2 to adenomyoma of the rectovaginal septum; 1 to cystocele and rectocele; and 1 to chronic pelvic inflammatory disease.

In this study they purposely omitted all cases in which there was some primary rectal disorder capable of accounting for the patient's discomfort. The authors conclude that when the patient complains of high rectal pain and a rectal examination is negative, we should pursue our investigation exhaustively in an attempt to discover something that will help us to give relief. In cases where a definite extrarectal lesion exists, such as prostatitis, adenomyoma, prolapse, sacrococcygeal disease and abnormalities in the pelvis, surgical intervention may be indicated; but even in these patients we should not be too optomistic in our prognosis.

W. A. H.

## Healing of Fistula-In-Ano

MR. MILLIGAN and Mr. Morgan, of St. Mark's, London, say of the after-care of fistula operations, "It is not the accepted custom to apply healing balm or lotion to wounds that heal by first intention. Reliance is placed on nature's healing powers. When healing by second intention is invoked [as after fistula operations.—Ed.], however, dissatisfaction with nature's rate and method of healing is at once implied by subjecting the wound to applications of lotions or ointments, labelled by the manufacturers, or even in the mind of the surgeon, as soothing, stimulant, antiseptic or caustic. In spite of this misguided attention, healing by second intention, provided the surgery is correct, maintains its own course and time, confirming the credulous in their faith and bestowing reputations on numberless and ever-changing applications."

W. A. H.

*A. J. Digest. Dis. and Nutrition, Oct., 1934.

# BOOKS

## Proctologic Transactions

TRANSACTIONS OF THE AMERICAN PROCTOLOGIC SOCIETY, 1934. *Birmingham, Alabama: American Printing Company. Price, $5.00.*

This volume of Transactions is uniform with and of the same high character as those published in former years. It contains, in its 200 pages, eleven scientific papers of unusual merit; also a number of unusual and interesting case reports.

There is a symposium on Physical Therapy in Proctology, in which eight proctologists tell of their results and lack of results (mostly the latter) with various electric agencies, in hemorrhoids, pruritus and stricture.

A second symposium is devoted to benign rectal stricture and its treatment, both surgical and non-surgical. The relation of *lymphopathia veneria* to this hitherto little understood condition is thoroughly discussed. In the light of this newer knowledge it would seem that our former ideas as to the etiology of such strictures must be largely revised.

A 28-page review of the literature for 1933-34, containing 300 references, is a veritable gold mine of proctologic lore.

Later, when occasion permits, we will summarize some of these valuable papers for the benefit of our readers. In the meantime, everyone interested in proctology will find it worth his money and time to secure and read a copy of these Transactions.

W. A. H.

### IT IS MORE BLESSED TO GIVE THAN TO RECEIVE

*Any progress made in the art of medicine, and any success that may have been achieved by any of its votaries, is due to the unselfishness with which those who knew gave to those who knew not. The only way that we, as physicians, can repay our obligations to the great profession of which we are a part, is to contribute our mite to the common fund of medical lore. Make your contribution now!*—W. A. H.

# A LIVING FOR THE DOCTOR

(The BUSINESS of Medicine)

## Hobbies

THERE are, unfortunately, few whose vocation has been so admirably chosen that it fills their entire lives with joy and satisfaction; and there are few vocations whose details are so varied as to afford an opportunity for the complete expression of one's personality.

Such being the case, it is necessary, if one is to live fully and richly, for almost all of us to develop and actively work at one or more avocations, or hobbies. One of these should take us into the open as much as is practicable and simulate us to take an adequate amount of physical exercise — which most professional men neglect to do. One should be a *creative* activity — making or building something useful or beautiful or both. One should lead to study, for the development of the mind and the higher and impersonal emotions, so that it can be pursued to the end of one's days. Sometimes (but rarely) all of these desirable features can be combined in one hobby.

The hobbies of medical men can be almost as multifarious as the range of human interests, and in a number of cases, physicians have become famous or prosperous as a result of their hobbies, rather than because of their professional attainments. This is, of course, especially true in the field of literature. How many people ever think of Rabelais, Goldsmith, Conan Doyle or Joseph Collins as being or having been healers of the sick?

But even if one does not ride to fame or fortune upon his hobby, it is bound, if well chosen, to add to his life treasures whose worth cannot be computed in terms of dollars and cents. The true and enthusiastic hobby rider will be a bigger, better, more capable human being (and, therefore, a better doctor) because of such riding.

At the recent annual midwinter meeting of the Chicago Dental Society — the most important occasion of the kind in the Midwest — they put on, for the first time, a Dentists' Hobby Show, which was of immense interest and importance. Among the exhibits were distinguished examples of pictorial photography; paintings in oils and water-colors; modeling in wax and plaster; ship models; sculpture in bronze and wood; hand-made jewelry and radio receiving sets; marketry; taxidermy; and a number of other arts and crafts, all of which, and many more, including creative writing and the composition or interpretation of various types of music, could be carried on by physicians as well as by dentists.

Many of our readers have, no doubt, followed hobbies, with joy and mental and spiritual profit, for years. One such is telling some of his experiences in this issue. We should be glad to hear from many more and to publish such communications as are found suitable, because we are convinced that well-chosen hobbies are an essential part of *A Living for the Doctor.*

## Personal Obliquity and Ideas

THE Chicago newspapers have recently been publishing the fact that a physician, who happens to have contributed one or two economic suggestions to this Department, has gotten himself into serious trouble in connection with illegal abortions.

It is always a source of sorrow when one of our contributors or readers is suspected of failure to live up to the principles of the Hippocratic Oath; but if he had good and helpful ideas before he made such a mistake, the value of the ideas themselves is not destroyed by the fact of his possible personal obliquity.

We make a sincere effort to admit to our pages, as contributors, only those whose ethical standards are sound and worthy and whose ideas, though sometimes new and unconventional, are within the bounds of reason; but we do not feel any sense of betraying the trust of our readers if one of these contributors now and then proves himself unworthy, personally, of the trust reposed in

him. If his ideas were sound in the first place, they remain so, no matter what he does subsequently.

It must be remembered that no editor can or does publish only articles, with the statements in which he personally agrees. The function of an editor is, so far as is possible, to give his readers a bird's-eye view of what is being thought and done in their particular fields of interest, leaving them to decide for themselves what is worthy of belief and use.

We believed, and still believe, that the economic notes offered by this physician, who is now in the hands of the law, have merit, and this note is, in no sense, an apology for having published them, but merely an explanation of our general policy along this line, which may be helpful to some of our readers, in case they should encounter any invidious remarks.

## Hoods

HOW many physicians were presented with those handsome green-striped hoods, to which they were entitled, when they completed the long grind through medical college? We can all remember wistfully watching some candidate for the degree of Doctor of Philosophy respond when his name was called, and be presented to "Prexy" with much bowing and tipping of caps. He was given a hood for his work on some obscure problem, the title of which few could understand.

Then came the Doctors of Medicine. Rising together, without individual recognition, without hoods, without acclaim, the entire class was collectively declared to have fulfilled the requirements for the degree of Doctor of Medicine, and therefore said degrees were forthcoming.

There is no answer to this situation, repeated all over the country every June, except that it would be too much trouble and take too much time to give the medicos their due. No one questions their rights to a hood and all of the dignified ceremony which accompanies its presentation. Why should they be treated as undergraduates, when the Ph.D's are raised up to the heights?

We call upon every university and college to give the Doctor of Medicine his due: individual recognition, a hood and an equal status with the Doctor of Philosophy.

D. H. ALLEN, M.D.

# Dog Breeding as a Hobby

By W. Meddaugh Dunning, M.D., New York, N. Y.

*"In life the firmest friend,*
*The first to welcome, foremost to defend,*
*Whose honest heart is still his master's own,*
*Who labours, fights, lives, breathes for him alone."*

MANY years ago, far too many for me to give the exact number, I read the above beautiful poem written by Lord Byron, who had it, with the following added, inscribed on a monument erected to the memory of his favorite dog, a black Newfoundland.

"Near this spot
Are deposited the remains of one
Who possessed beauty without vanity,
Strength without insolence,
Courage without ferocity,
And all the virtues of man without his vices.
This praise, which would be unmeaning
Flattery if inscribed over human ashes,
Is but a just tribute to the memory of
Boatswain, a dog,
Who was born at Newfoundland, May, 1803
And died at Newstead Abbey, Nov. 18, 1808."

With profound memories of the impression it made upon me and the ever present instincts of my forebears (all were ardent admirers of dogs), is it any wonder that "Man's Best Friend" has always been near to my heart?

As a small boy there was always a dog accompanying me on my walks. I always took a keen delight in watching the gradual growth and development of a dog from puppyhood to full maturity; and so on down the path of memories my affection for dogs has persistently placed them before all other hobbies.

This hobby was strengthened, perhaps, when I located in the northern part of Bronx County, for here were some famous kennels, from which came world champions. I clearly recall the splendid Gordon setters, "Heather York," "Heather Bee," "Bellmont" and "Flomont," belonging to James B. Blossom, and the pointers, "Lad of Kent" and "Lass of Kent," bred and made champions by George Jarvis. In those days one could get all kinds of game, both fur and feather, in the marshes back of Hunter's Point, but little did I think, in those days, that in years

to come I would get the dog hobby so badly as to journey to England in quest of champion dogs, and be elected president of a Kennel Club whose annual show is a "Mecca" for fanciers from all parts of the world.

While I am fond of all breeds of dogs, my especial love is for the Airedale. I shall never forget the thrill I got from Paul Rainey's famous moving picture of his hunt for big game in Africa. Many may recall the gameness of the Airedale, which repeatedly treed the lions and held them until the hunters came up.

Soon after this, I had trouble at Spy Lake, my Adirondacks summer home. The rodents were killing everything and traps were of no avail. Friends suggested getting a dog of the bull-terrier cross, but with memories of the Airedale in Paul Rainey's picture, I decided on a "Yorkshire Tyke" (as the miners in the valley of the river Aire, in Yorkshire, call their favorite breed), so I got a daughter of the world-famed champion, "Soudan Swiveller," and right well did she do the work of rodent exterminator. I later bred her to the noted champion sire, "Normanton Tipit," and succeeded in raising a very fine litter, from which was selected a well-matured female, and she was mated to champion "Briarcroft Nut-Brown."

From this breeding and an out-cross to champion "Craigmiller Prince," came the now famous "Stymie" strain of champion Airedales, of which perhaps the most consistent winner was my favorite, "Stymie Girl's Dream," which made a most successful debut at the Westbury show and went on through the circuit to win many prizes.

This aroused the desire for further fields to conquer, and during my recent trip to England, I visited the prominent shows and purchased the noted winner, "Dorlene Dairymaid," spoken of as the best of champion "Matador Mandarin's" get. I had her mated to champion "Towyn Sunstar," but, alas, she did not have puppies; however, among her many sensational victories in England, were three first prizes at Luton, where she defeated the Crufts champion.

I tried to purchase the then British champion, "Matador Mandarin," but he was "not for sale." The outstanding English paper, *Our Dogs*, had the following to say about the purchase of "Dorlene Dairymaid," and reference to my forebears, from whom I must have inherited my profound love for man's best friend the dog.

"America came very near getting another famed champion Airedale. What might have been a decided loss to the British dog world was circumvented by the astuteness of the owner of that truly great Airedale, champion "Matador Mandarin," who refused a record price from our genial American visitor, Dr. W. Meddaugh Dunning, of New York City. It may be recalled that Dr. Dunning recently purchased the impressive winner, "Dorlene Dairymaid," and being so smitten with her type, wanted to also take back the sire, but on this occasion the "almighty dollar" did not have the right of way.

"Rumors had it that Dr. Dunning was taking back some Devonbred pointers, which caught his analytical eye during his trip through beautiful Devonshire, the county from which came his forebears, who in the Spanish Armada period, with John Hawkins, Francis Drake, the Frobishers and other "famed seadogs" were keen on hunting, both fur and feather, in the nearby Coombes."

Be that as it may, I certainly love dogs and feel they are companions bound up closely with our daily lives. This is a confession of my love for dogs, a hobby that has given me many a pang of sorrow but years of deep affection and much devotion that only man's best friend can give.

391 E. 149th St.

# Notes and Abstracts

## The Medical Economic Problem

WE must present a "new formula" to meet changing conditions wherein medicine and medical care are recognized as an important commodity to be delivered solely by those most qualified—the doctors, under medical supervision alone. We, the 100,000 physicians of the United States, can and will supply excellent medical attention to the 120,000,000 Americans, but we cannot be expected to bear the larger portion of the medical-financial burden.

The economic status of a large group of the people precludes their paying for even a semblance of adequate medical care, but we, the doctors, will never permit the type of service rendered to them to deteriorate, which must of necessity happen in socialized medicine. We have always been willing to do our part, but today we cannot bear a dual burden. It is impossible for 100,000 men, regardless of ability, both to deliver medical service and finance it.

The challenge and the problem are, therefore, not medical but purely economic and

financial. Give us a reasonable budget and we will take care of the sick.—In *Priv. Phys.*, Jan., 1935.

**The Advertising Pages are part of what you pay for. Use them!**

## Advertising and Living Standards

ADVERTISING has stimulated production by stimulating consumption on so vast a scale as to bring about a higher standard of living among the American people than could possibly have existed without advertising, under any system.

In those countries where the standards of living are highest, the proportion of advertising is greatest; and as the standard of living goes down, the standard of advertising goes down.

Moreover, if the freedom of advertising should be limited, as its adversaries propose to do, by standarization and regimentation of manufacturing and consumption, we would do away with a large part of the American press; and the first to go would be the country newspaper, which is the very backbone of our American democratic freedom.

ALBERT D. LASKER.

New York City.

Since I renewed my subscription to CLINICAL MEDICINE AND SURGERY several months ago, there has not been an issue which has not been worth to me the price paid for the whole year's subscription, and some issues have given me a boost that brought me in, *in dollars*, several times the amount of a whole year's subscription.—Dr. W. L. F., Idaho.

## More "Relief" Interference

A MAN and wife, he being a farmer on work relief, asked me relative to attending a confinement case about four months later. I, having known him from babyhood and being thoroughly familiar with his circumstances, quoted him a price of $40.00 for pre- and post-natal care and confinement, including an 8 mile trip. He said that he had more money than that saved up for it and considered it satisfactory. This was a reduction of $20.00 from my regular rates.

About a month later, they making trips to my office as necessary, they came in one day, having been to the "Relief" office the day previous, at the County Seat, 12 miles from their home. While in the "Relief" office, the social service worker sent there by the Federal set-up, asked him what arrangements he had made regarding his wife's confinement. He replied he had engaged a physician, and his wife was under treatment. She then asked him what he was to pay the doctor. He replied $40.00. She said, "That is entirely too much. Doctors are supposed to make a very great reduction in their fees to people on the relief lists." She offered to get him a physician from the County Seat, who would attend his case, pre- and post-natal care and the 12 mile visit, for $15.00.

They came down to ask my advice, and there was only one honest reply I could make, which was: "The physicians in the County Seat are all qualified and capable men and can attend your wife's confinement case just as satisfactorily as I can. They are all, as I am, members of their County and State Society and, if you can save $25.00 in cash, close the deal at once, as you will have $25.00 for clothes or pleasure that you did not expect to have."

This is possibly organized medicine. Of course, this fee of $15.00 for this confinement case will establish that as the rate for that section, or the fee that prevailed in the old horse-and-buggy days of twenty-five years ago, when food and clothes were cheap and taxes, at least in this state, were negligible. While that automatically lifts these cases away from me, it also establishes a rate, at which I do not believe any one can come out even.

Of course this is not interesting to the men in high places, nor can I see any hope of betterment, when Organized Medicine is willing to accept the deal being handed out by the Federal agencies and continue to render services at less-than-cost fees.

PERCY F. LISK, M.D.

Ft. McCoy, Fla.

[If it were possible to secure unanimity of action by the physicians in any community or county, regarding the prices at which medical services to the Relief agencies would be performed, it seems highly probable that they would have the matter in their own hands and could demand, and *receive*, reasonable fees for such services, because, under present conditions, they *must be* provided.

So long as there are medical men who have so little respect for their own professional ability and for the rights and welfare of themselves and their confreres as to sell their services at starvation prices, there will be eager, job-holding and job-hunting politicians who will take advantage of their weakness and exploit them.

If any of our readers know of instances where physicians are cooperating intelligently for their own salvation, we shall be glad to hear particulars and to publish them for the encouragement and enlightenment of others.—ED.]

# THE SEMINAR

## "A MONTHLY POSTGRADUATE COURSE"

(NOTE: Our readers are cordially invited to submit fully worked up problems to the Seminar and to take part in the discussion of any or all problems submitted.

Discussions should reach this office not later than the 5th of the month following the appearance of the problem.

Address all communications intended for this department to The Seminar, care CLINICAL MEDICINE AND SURGERY, Waukegan, Ill.)

## Problem No. 2 (Medical)

**Presented by Drs. E. D. Tanquaray and R. Y. Strohm, Fort Scott, Kans.**

(See CLIN. MED. & SURG., Feb., 1935, p. 89)

*RECAPITULATION:* A woman of 33 years, whose family and previous personal history seems to have had no bearing on the case, was married at the age of 21 years, experienced normal libido, and two years later (1924) gave birth to a baby, after a long but normal labor, following which she had pain in the lumbosacral region.

About three months postpartum she developed bilateral pain in the pelvis, and in August, 1925, underwent a complete salpingo-oophorectomy and hysterectomy, from which she recovered promptly.

About two months after the operation she began to have headaches, centering in an area the size of a silver dollar over the left occiput and ocurring every month, with occasional intermissions. Sometimes the attacks were preceded by nausea and vomiting. Up to 1929, these headaches could be relieved by ordinary analgesics.

About six months after the castration, she entirely lost all sexual feeling, and intercourse is now repulsive to her.

In 1930 the headaches became more severe and frequent, requiring morphine for relief. In January, 1934, an attack lasted for four weeks, with nausea and vomiting. Sometimes there is an "aura" of nervous tension the day before an attack.

These attacks now occur about once a month and last from several hours to a day or two. The pain is "piercing" and is strictly localized, sometimes being so severe that she pulls out hair over the left occiput. There is also fever, to about 100°F. The attacks stop rather suddenly, and between them she feels quite well.

Physical and laboratory examinations revealed nothing of moment except a four-plus blood Wassermann reaction; spinal fluid, negative.

*Requirements:* (1) Suggest diagnosis and treatment, stating reasons; (2) What, if any, further information is needed to make a diagnosis?

**Discussion by Dr. Gerrit J. Warnshuis, Cedarburg, Wis.**

Upon first thought, one would be inclined to dismiss the matter with an unqualified diagnosis of syphilis, characterized possibly by a gummatous lesion in a "silent" area of the cerebral cortex, and apply the usual course of anti-syphilitic treatment.

There are some interesting features about this patient, however, that upon reflection appear worthy of discussion. The clinical picture would certainly make one highly suspicious of a chronic infection with severe toxic effects, and the peculiar nervous and subjective character of the symptoms points toward a syphilitic type of infection, even without the confirming 4-plus Wassermann reaction.

One outstanding feature is the *cyclic* character of the attacks. Many chronic infections behave in this manner—a slow accumulation of toxic material and increasing microbic invasion until a tolerance is overcome, with a consequent crisis, followed by a period of improved wellbeing until the reaction subsides and another cycle of invasion and microbic growth sets in.

The mental condition deserves serious consideration and is of vital concern to the patient. Before reaching maturity she underwent a major operation, which was something of an ordeal. Early in married life she lost her only child and has been in poor health ever since. These circumstances have scarcely been conducive to a wholesome family life and may easily give rise to frustration complexes, hysteria and morbid sentiments, such as the frigidity mentioned in the history.

The husband and other immediate relatives, as well as the patient herself, must be made to understand, first of all, that her con-

dition is not hopeless; that the ill effects of these past experiences can be overcome; that she is still a young woman with the prospect of a long and useful career before her, in which the past may be submerged like a bad dream. *This is most imperative.* No medicine can combat the insidious poison of fear, discouragement and introverted ideas. All negative thoughts must be dismissed. We must "pluck from the heart the rooted sorrow."

I think that something more than arsenicals and other specific treatment is indicated here. There may be some degree of morphine addiction and, in that case, small daily doses of insulin will facilitate its withdrawal and reduce any conscious or subconscious craving for the drug. About 2 grains daily of corpus luteum or 4 grains of whole ovarian extract may overcome some of the ill effects of a premature menopause.

The fact that her bowels move daily means nothing so far as colon function is concerned. An extensive pelvic operation is almost certain to be followed by adhesions. These, combined with the mechancial interference with colon activity during pregnancy, cause a marked impairment of the colon, with grave systemic effects. Conservative colon therapy is, therefore, strongly indicated.

Finally, I would again emphasize the probability of a pronounced hysterical element in the subjective symptoms—particularly the pain as described—and the need for psychotherapy.

**Discussion by Dr. F. A. Northrup, Pierre, So. Dak.**

In the past two or three months I have seen two cases showing conditions almost identical with those presented in Problem No. 2. The second patient had been operated upon three different times, with no favorable results—in fact she was, if anything, worse than before.

When this woman came under my care, I diagnosed *chronic gonorrhea* and treated her for that condition, with an apparent complete cure.

With the pelvic history given in this problem, this is the first condition to be considered.

**Discussion by Dr. C. H. Kennedy, Fort Smith, Ark.**

Libido, marriage, childbirth, immediately followed by pelvic infection! The gonococcus travels like wild-fire after abortion, miscarriage or confinement!

Although not so stated, it is presumed that the operation nine months after delivery was for salpyngitis. But why the hysterectomy? This operation desexed a young woman of admittedly strong sex proclivities, and this, in many cases, is most devastating to the nervous system and upsets the mental equilibrium.

I would consider the probability of gonococcic and syphilitic infection taking place at the same time. Latent syphilis is probably present now, with a gumma so located and of such size as to cause some head symptoms and vomiting; with neurasthenia producing, or influencing to a considerable degree, the periodic manifestations in the beginning, and later a rather strong addiction to morphine, which demands satisfaction and which needs only a slight aggravation of the symptoms to suggest the necessity to the patient. The normal pulse, temperature and respiration would suggest that the woman was not really suffering so severely as her actions might indicate, in the presence of a demand for narcotics.

As to treatment, I would suggest Colloidal Mercury Sulphide (Hille) and insoluble bismuth, alternated; some ovarian extract and possibily some thyroid; and get her off morphine (if possible), as soon as possible.

In all pelvic flare-ups of this kind, coming right on the heels of abortion, miscarriage or confinement and where there is no indication of general sepsis, the possibility of latent gonorrheal infection should be suspected, regardless of the social standing of the patient.

Had this patient been put on some form of ovarian feeding immediately after her operation, some of the neurasthenic condition might have been avoided; and had she been put to bed immediately on development of the pelvic flare-up, kept there for three or four weeks and given copious douches of hot sodium bicarbonate solution, the operation might not have been necessary. But now there is, not only syphilis, but neurasthenia and morphine addiction to combat, and both or either of the latter is worse than the first.

**Discussion by Dr. E. C. Junger, Soldier, Ia.**

Problem No. 2 is certainly a case! It seems rather strange that a normal woman, after a normal confinement, should need both ovaries and tubes removed, also the uterus. Of course, the uterus is just that much excess baggage with the ovaries gone, but I maintain that it is a crime to remove both ovaries in a young woman. Why should it ever be necessary? I have seen epilepsy develop after removal of those organs in girls. If this woman is not now a pretty well established neurotic and morphine addict I would put her down as a well-balanced individual.

Ergot, bromides and ovarian extract, plus corpus luteum, should have been administered after that mutilating operation, until the artificial menopause had been pretty well established, thus saving the nervous system the sudden shock to which the double oöphorectomy subjected it. The pathetic situation of that early libido no doubt is to blame for that 4-plus Wassermann reaction, and those frequent headaches are probably due to a gumma in the brain.

Give this woman 10 grains of calomel about twice a month and anti-syphilitic treatment; some phenobarital or other brain sedative to keep down brain irritation. Chloroform will put these patients to sleep promptly and does less harm than opiates.

**Discussion by Dr. Geo. B. Lake, Waukegan, Ill.**

Two points stand out in this case: The complete hysterectomy and the 4-plus Wassermann reaction.

For the former condition this patient requires ovarian substitution therapy, for which a number of reliable products are now available. At first she will probably need both the intramuscular and oral administration of such remedies (or, more accurately speaking, *specialized additions to her diet).* If this does not produce satisfying results in a few weeks, it would be well to try adding two or three intramuscular injections a week of a reliable anterior pituitary extract.

A positive Wassermann reaction, without clinical signs and symptoms, is not enough evidence upon which to base a diagnosis of syphilis. It would be well to have two or three such tests made. If these are also positive, one will be justified in making a *therapeutic test,* by the administration of ten or more intramuscular injections of Bismarsen, or some other reliable antisyphilitic remedy.

The psychic aspects of this case should not be overlooked, and a detailed study of this woman's domestic life, from childhood onward, and her reactions to it, may reveal factors of definite importance.

I cannot agree with Dr. Junger's suggestion of putting this woman to sleep with chloroform. Unless the doses were excessive, the effects would be rather evanescent; and moreover, the dangers of a fatality or of habit formation are by no means imaginary. A combination of a barbiturate with an analgesic, as in Amido-Neonal or Allonal, will probably be the most satisfactory palliative.

**Closing Comments by Dr. R. Y. Strohm**

The following were the laboratory findings on M. K.: Urine, faint trace of albumin, otherwise negative; red blood-cell count, 4,450,000; leukocytes, 6,000; hemoglobin, 90 percent. The *blood chemistry* studies showed: non-protein nitrogen, 31.2; creatinine, 1.4; sugar, 86; chlorides, 450; uric acid, 3.8, all in milligrams per 100 cc. *Spinal fluid examination* showed normal pressure; globulin, negative; cell count, 8; colloidal gold, 0000100000; spinal fluid Wassermann reaction, negative. X-ray studies of the skull showed no abnormal findings. The basal metabolic rate was plus 2. Ocular findings: Vision, R. 20/100; L. 20/100; with glasses, R. 20/20; L. 20/30. The fundus showed no choked disc; no optic neuritis; no optic atrophy, at this time. There was no irregularity, no immobility, no inequality, no Aryll Robertson pupil and no ocular palsies.

*Treatment:* For about 4 months I gave M. K. 4 to 6 tablets of thyroid 1/6, pituitary 1/12 and ovarian substance 1½ grains. This decreased the headache somewhat; that is, the periods of headache were about 2 weeks apart. The past 2 months I have been giving her Theelin in oil and Antuitrin S. For the past month the attacks have been less severe, but still occur at about 2- to 3-week intervals. Between attacks she feels entirely well, and has gained about 6 pounds in weight.

## Problem No. 4 (Medical)

**Presented by Dr. J. J. Bunn, Mt. Pleasant, N. C.**

MALE; age 49; weighs between 225 and 230 pounds; past history not of much importance. He had diseases of childhood and influenza 2 or 3 times, the last attack being about a year ago. For the past 25 or 30 years he has been a moderate user of spirits of various kinds and a very heavy user of beer. He is the owner of a hosiery mill, where he hangs around but does very little.

The present attack occurred in November, 1934, after a very hearty dinner and the use of some beer. He and a friend started to play a game of pool, when he became suddenly dizzy and felt faint. He became very pale; skin a little moist; pulse 96, regular but weaker than normal. After lying down he felt a little better for a while, but soon became sick again and vomited, after which he felt better again. He vomited several times that afternoon and always felt somewhat better after each vomiting spell. He had no pain anywhere. He felt very well next day, but had to remain in bed a couple of days because of the dizziness. About a week later he felt as if he were going to have another attack, but it soon passed off. His blood pressure was 190/100. Now, after a few electrical treatments, it is 145/85. His Wassermann reaction is negative.

I could find no organic trouble on physical examination. His kidneys, heart, lungs, sinuses, teeth and abdominal organs all seemed to be normal. I thought there was a slight hardening of the radial artery. I saw this patient in an attack which occurred about four or five weeks after the first one. He went to New York about the first of January, and I think he drank very much, though he says he did not. I will try to describe the second attack.

He came home, and the "spell" was somewhat like the first. He felt faint, but did not become pale and sweat, as he did in the first attack. At this time he had eaten nothing for about a day. He tried to vomit, and did vomit a little after drinking a pint of warm salt

solution. He said he felt "sick" or "funny" and sometimes he would say "faint"; also there was slight pain in the left shoulder, which soon subsided.

I gave him 1/16 grain of Dilaudid, but it caused some dyspnea and he said he felt as if he were "just passing away." The after effects lasted about 12 hours, but it relieved the sick feeling, which never returned.

He had a chill the third night. After the chill, the fever went to 101°F. There were no more chills and no more fever until the fifth day, when the fever went to 99°, after which there was no more fever. The pulse has varied from 90 to 120, and was not so strong as it should be. I was able to detect a systolic murmer at the apex, and transmitted up the sternum, and the occasional skipping of a beat. He said he felt "a little tight in his chest," but this was relieved after taking a capsule of Theominal and Amytal. His appetite has been fairly good (he is a big eater when well). His heart is not enlarged, as far as I could tell. I could not feel the apex beat.

When well and taking much exercise, he urinates often (six or eight times a day) and the urine is "clear like well water"; but when he sits around, he does not void so much and it is amber in color.

He is very nervous at times, with some slight dyspnea on exertion. There was no edema, and the urinalysis was negative. His first attack lasted about one week; the second a few hours. He felt well, but was afraid to get out, for he still felt dizzy. He never has had any pain anywhere, except that the back of his head hurt a little one time and the slight, transient pain in his left shoulder.

*Requirement:* Suggest diagnosis and treatment. What was the cause of the chill and fever on the third and fifth days?

## ENDOMETRITIS

Remember that the starting-point of inflammatory affections of the uterus is, usually, the endometrium, and may extend, eventually, to the muscular wall or to the peritoneum. Thus the uterine mucosa is the origin of nearly all of the inflammatory lesions of the pelvic organs.

Remember that all inflammations of the endometrium may be divided into the infectious and non-infectious.

Remember that septic endometritis is nearly always found following abortion and labor. It may follow insertion of instruments into the uterine cavity or operative procedures upon the cervix.

Remember that in acute endometritis there is a leukorrhea, sometimes profuse; or it may be thin and serous.

Remember that the history of a previous opertaion on the uterus or instrumental treatment should suggest endometritis.

Remember that sterility and abortion are very common in endometritis, caused by the changes produced in the mucosa by the disease.

Remember that the general physical condition of the patient varies. She may experience no ill feeling, or she may be hysterical, complain of dyspepsia, flatulence and loss of appetite.

Remember that the speculum reveals the origin of the leukorrhea and usually the cause of the endometritis, such as a torn cervix.

Remember that the gonorrheal variety of endometritis is due to the presence of the gonococci in the endometrium.

Remember that in the normal state the *cavum uteri* is absolutely free from pathogenic micro-organisms, hence infections must come from without. These may occur by the organisms ascending from the vagina, as is seen with the gonococci; or by manipulations at labor or at time of an abortion; or the most common method is by instruments introduced into the uterus.

Remember that the organisms most frequently found are the gonococci, the streptococci and the staphylococci. Infection by other organisms is not so common.

Remember that microscopic examination reveals the organism causing the endometritis and should always be made before any opinion is given by the physician as to whether it be a gonococcus or streptococcus infection.—GEORGE B. NORBERG, M.D., in "Golden Rules of Gynecology."

# CLINICAL NOTES and ABSTRACTS

## Pain in the Face*

MOST (but not all) cases of pain in the face, severe enough to warrant the patient's sending for a physician, are due to **trifacial neuralgia** or **tic douloureux,** which is rare in patients under forty years of age, and generally occurs after fifty.

In order to diagnose this malady accurately, it is best to *see* the patient in an attack; otherwise one must depend on the history.

The symptoms of a typical attack of trifacial neuralgia are:

1.—Sharp, shooting pain.

2.—Paroxysmal, with free intervals between.

3.—Superficial pain, referable to one or more branches of the *fifth nerve only.*

4.—Increases in severity with time.

5.—Rarely occurs at night.

6.—Has "trigger zones" to start it, which, when touched, cause the patient to give evidences of dread.

7.—Begins unilaterally and generally in one branch, spreading to *contiguous* branches; does not alternate sides.

8.—Sufferers rarely become drug addicts or commit suicide, because the pain is intermittent.

9.—If the patient refuses the injection or operative treatment, because of fear of an anesthetic, the condition is *not* true trifacial neuralgia.

10.—A successful injection of alcohol relieves the pain.

**Differential Diagnosis**

I.—"*Atypical Trifacial Neuralgia*"

1.—Dull, bursting pain.

2.—Continuous—*not* paroxysmal.

3.—Pain deep-seated.

4.—May stop spontaneously.

5.—Occurs at night.

6.—No "trigger zones."

7.—Goes beyond the area of the fifth nerve.

8.—Sufferers frequently become drug addicts or commit suicide.

9.—Alcohol injections do not cure.

II.—*Auricular Neuralgia.*

Rare; pain centers around the ear.

III.—*Sphenopalatine Ganglion Neuralgia* (Sluder).

The symptoms resemble "Atypical Trifacial Neuralgia." It is doubtful if this is a true disease entity.

IV.—*Geniculate Ganglion Neuralgia.*

Characterized by pain and herpes around the ear.

V.—*Glossopharyngeal Neuralgia.*

Begins in the throat—tonsil and anterior pillar—and runs up toward the ear; relieved by cocainization of the "trigger zone."

VI.—*Postherpetic Neuralgia,* Ophthalmic Division.

The pain is more or less continuous and improves spontaneously.

VII.—*Glaucoma.*

The pain is neuralgic and in the orbit. Other symptoms point the way.

VIII.—*Dental Pain.*

Deep, aching, throbbing, continuous pain; due to caries, abscess, etc.

IX.—*Sinus Pain.*

The pain shows neuralgic exacerbations, between which it is dull. There is fever and leukocytosis and the x-rays will decide the diagnosis.

X.—*Migraine.*

The pain may be unilateral or bilateral, is continuous during an attack and is accompanied by nausea and vomiting. The condition begins at puberty and does not progress.

XI.—*Psychogenic (Hysterical) "Pain."*

The patient has no real *pain,* when pinned down and asked to describe it. The feeling is "tenseness," "numbness," "pressure," "uneasiness"—not *pain.* Erratic features and associated conditions accompany it. It is *no joke.* Take a *careful history,* with details and sequence of events.

XII.—*Brain Tumor,* with pressure on the gasserian ganglion, produces dull pain between the attacks, with progressive anesthesia and motor paralysis.

XIII.—*Neurosyphilis.*

Tabes may affect the fifth nerve, but the pain is generally bilateral and involves several branches; moreover, there is pain in other parts and also other symptoms.

Patients may have facial pain of two or more types simultaneously. We should not be satisfied with a single diagnosis if the symptoms do not respond to the treatment which seems to be indicated.

MEYER SOLOMON, M.D.
Chicago, Illinois.

*Abstract, by G. B. L., of a talk before the Medical Round Table of Chicago, October 8, 1934.

## Pneumothorax in Pulmonary Tuberculosis*

EFFECTIVENESS of collapse of diseased lung areas is the greatest single factor in obtaining successful results, whether immediate or more remote. It seems obvious that valuable time is often lost in continuing over a long period a poor pneumothorax, when other and more promising measures are available, or when the patient is obviously deriving no benefit from the procedure.

The data we obtained furnished no substantial support for the common impression that patients under twenty years of age respond poorly to collapse therapy. In fact, measured by immediate results and effectiveness of collapse, those under thirty-five fare better than those over that age. Wider use of pneumothorax in the group under twenty seems indicated.

The later results, in general, assessed one to fifteen years after termination of pneumothorax treatment, appear distinctly gratifying. Although a considerable number of patients could not be traced, over 70 percent of those followed were still living, and of these three-quarters were able to work. Thus, with due consideration of its very considerable limitations, artificial pneumothorax appears to be undeniably one of our most valuable therapeutic measures in the treatment of pulmonary tuberculosis. Its discontinuance seems warranted, in many cases, after a reasonably adequate period of effective treatment, which cannot be too dogmatically predicted.

DRS. PETERS, POPE, MORRISS, PACKARD and MILLER.

**Look for THE LEISURE HOUR among the advertising pages at the back.**

## Fish As Food

THERE are 162 different varieties of fish and shell-fish regularly produced and marketed in the United States; and these sea animals are practically the only natural source of vitamin D and among the richest food sources of iodine and calcium. Their flesh is delicate, easily digested and offers considerable variety in taste and texture, as well as being, in most places, lower in price than are the red meats, especially when only the edible proportions are considered in each case.

Whatever is taken directly out of the ocean is a net addition to the wealth of the country to the extent of $300,000,000 a year and, for all practical purposes, depletes no reserve of any national resource. Moreover, the fish industry, in all its branches, gives employment to about half a million people, thus supporting, also, their nearly or quite a million dependents.—FISH AND SEAFOOD INSTITUTE.

*Am. Rev. of Tuber., Jan., 1935.

## Vaccines and Filtrates in Focal Infections*

ERADICATION of foci of infection is the most important factor in the treatment of arthritis and neuritis of infectious origin, as was pointed out previously by Billings and Rosenow. Roentgen-ray-negative devitalized teeth are often a focus of infection.

Homologous filtrates and vaccines may be used with good results in certain cases where the patient's resistance is not too low. In many cases in which the removal of foci had not appeared to result in satisfactory improvement, good results followed the use of vaccines and filtrates.

High-vitamin diets, together with accessory treatments such as light, heat, exercise, massage, sun baths and rest, are always indicated as an aid in improving the patient's general condition. Vaccines or filtrates were not used unless the removal of foci and general treatment did not result in sufficient improvement.

In many cases where the foci were postnasal infections in which surgical aid was not indicated (i.e., no definite sinus involvement or not enough lymphoid tissue to justify removal), the intradermal use of a filtrate was of value.

WILLARD L. WOOD, M.D.,
LLOYD B. JENSEN, Ph.D.,
WILBER E. POST, M.D.

Chicago, Ill.

## Urinary Stasis: Its Influence on Chronic Infection of the Urinary Tract†

THE urinary system is just one big excretory organ, whose purpose is to eliminate excess fluids, solvent poisons and acids from the blood stream. A large percent of all poisons absorbed in the alimentary tract, as well as the internal poisons formed in the body by breaking down of body cells in the usual activities of daily life, are eliminated by this urinary system.

Live bacteria, such as colon bacilli, typhoid bacilli and the Gram-positive cocci group may be, and often are, passed through the urinary system without any disturbances. Even if there is an acute infection of the urinary tract following a severe cold or attack of influenza, or from some focus of infection such as tonsils, teeth, etc., it will usually clear up of its own accord when the cause is removed, if there is no urinary stasis. But if there is stasis at any point, it not only forms a good breeding place for any bacteria that might under normal conditions be passed out without any harm, but actually, because of in-

*Ann. Int. Med., Dec., 1934.

†W. Va. Med. Jour., Jan., 1935.

flammatory reaction due to stagnant urine, courts proliferation of the organism and infection of a chronic nature.

In practically every case of infection of the urinary tract of a subacute or chronic nature, in all probability there is stasis of some degree in the part involved. This does not necessarily mean that in all cases of stasis we have infection, for in many cases we do not, especially if the urine is sufficiently acid. This is demonstrated very clearly in pregnancy, where we have a normal amount of stasis in each case. This is physiologic stasis, due to hypertrophy of the muscles of the trigone in the bladder; also in many cases to pressure of the enlarged uterus on the ureters, in which case the stasis is found in the upper urinary tract. Yet all cases of pregnancy do not have urinary tract infection. On the other hand, infection is quite a common complication in pregnancy, most usually found in the upper urinary tract in the form of pyelitis on one or both sides, causing chills and fevers, with toxic symptoms. If a ureteral catheter is passed for drainage and kidney lavage, the temperature immediately drops and the other symptoms subside. This being a temporary stasis, most cases of infection with pregnancy clear up promptly, of their own accord, as soon as the pregnancy ends. If it does not, we should look for pathologic stasis.

Stasis means that either the normal urinary vesicles or some abnormal cyst or pocket is not emptying itself. In other words, stasis means retention and is caused by obstruction to the free flow of urine in a normal way. Obstruction may be found anywhere along the urinary tract, from the meatus to the kidney pelvis, and may be either congenital or acquired. An essential fact is that the results of obstruction upon the kidneys are fundamentally the same, regardless of the point at which the obstruction occurs. There are variations, however, in the course of the lesion and in the relative importance of the functional and anatomical changes, according to the distance at which the obstruction is located from the kidney. Some of the more common infravesical obstructions are: urethral stricture, prostatic hypertrophy, congenital valve of the urethra, prostatic abscess and vesical or urethral calculi, nephroptosis with aberrant vessels, kinking of the ureter, and pressure upon the ureter from abdominal tumors, pelvic tumors and abscesses.

Few people realize the full importance of obstruction in the urethra. Stricture, however slight, requires some extra effort to expel the normal urine. This in turn increases the pressure in the bladder. However, as long as the bladder muscles are able to empty the bladder entirely, there is little real pathosis produced, except the stricture itself. But sooner or later the bladder muscles begin to weaken, cellules and diverticula form, and we have residual urine. This constant pressure in the bladder destroys the functional power of the valve-like arrangement at the ureterovesical orifice, which in turn increases pressure in the ureter and causes dilatation. At every effort to empty the bladder the urine is forced back into the kidney, increasing the pressure in the kidney pelvis. It is at this time that hydronephrosis begins. In the case the obstruction is supravesical, the pressure is all from the functioning kidney. If the obstruction is complete and constant, we first have severe kidney colic and then suppression of urine, with relief from pain. But if the obstruction is partial, the pressure of the functioning kidney on itself will also produce hydronephrosis. In either case the hydronephrosis increases and eventually the kidney is destroyed.

The pathology of the entire urinary tract, especially the upper tract, is so important that we owe it to ourselves and our patients to make every effort possible to find the cause of chronic infection and eliminate these causes before the destructive condition is far advanced. Where urinary infection persists, look for the cause in some focus of urinary stasis, which in most cases can be corrected. Do not allow a chronic urinary infection, which perhaps is not causing severe symptoms at the time, to run on until irreparable damage is done to the kidney, which is a vital organ.

J. U. Rohr, M.D.
Charleston, W. Va.

## Post-Operative Vomiting*

ANESTHETISTS who have used nitrous oxide and oxygen, or ethylene and oxygen, know that freedom from vomiting is commoner than where chloroform or ether is used. Up to the present, however, the surgeon's bias in abdominal work has been rather toward ether, on account of the greater relaxation obtained.

Morphine and atropine, given in the usual way, cannot be improved upon. I use morphine gr. 1/6 (10 mgm.) and atropine gr. 1/100 (0.6 mgm.)

Some years ago there was a great deal written about the de-etherization of the patient by the administration of oxygen plus 10 percent carbon dioxide; the results were not good as regards vomiting, and were thoroughly unpopular with the ward staff; for instead of the patient remaining comfortable for some time after leaving the operating room, she required attention almost immediately and was obviously more shocked than if she had been left alone to eliminate the ether in the ordinary way.

*Brit. J. of Anes., July, 1934.

In insulin and dextrose we have a real advance in both prevention and treatment of post-anesthetic toxemia, and one that deserves wider recognition than it has at present. My technic is as follows: Two ounces of dextrose by mouth three hours, and 5 units of insulin hypodermically half an hour before operation. On return to the ward the dose of insulin is repeated, and four or five hours later 4 ounces of dextrose are injected by rectum, except in the cases of vaginal operations, when 2 ounces are given by mouth.

G. F. RAWDON SMITH, M.D.

Liverpool, Eng.

## Colonic Irrigation

THE January issue of CLINICAL MEDICINE AND SURGERY is especially good.

In regard to the article by Dr. J. O. Day, on page 45, I have made a reputation by carrying (and frequently using) a large fountain syringe for giving high enemas or colon irrigations.

Were I in Dr. Day's place, I should do away with the cord around the waist, to hold the nozzle of his irrigator in place, and attend to that matter myself, or have a nurse do it. Someone has to be constantly on duty, in any case, to take care of the inflow and outflow of the irrigating fluid.

I have found that if the fluid used for high enemas or colon irrigations is used *hot* (120° F.), it is more stimulating to elimination and also frequently causes profuse sweating, which aids in getting rid of toxic wastes.

E. C. JUNGER, M.D.

Soldier, Ia.

## Immediate Pneumococcus Typing*

SABIN'S immediate pneumococcus typing, by the Neufeld reaction directly from sputum, requires no special apparatus or laboratory animals. Its main requisite is diagnostic anti-pneumococcus serums (rabbit), in Types I, II, III and VIII, manufactured by Lederle Laboratories.

The method described by Sabin[1] is quoted as follows:

Two small flecks of sputum are placed on a cover slip (about 22 by 50 mm.) with a platinum loop, the diameter of which preferably does not exceed 2 mm. When the sputum is very tenacious, as it frequently is, it may be necessary to use another wire for getting the sputum off the loop. To each bit of sputum, an equal quantity of the undiluted rabbit serum (Type I serum to one and Type II serum to the other) and a loopful of standard alkaline methylene blue was added. A special deep, large, hollow-ground glass slide, big enough to cover both drops, was used; this special slide is convenient but not essential. The edges of the slide are smeared with petrolatum, it is placed over the cover slip and the preparation is inverted. The examination is made with the oil-immersion lens and an artificial blue light. Although the reaction occurs almost immediately, it is best to delay the examination for about two minutes, to allow for proper diffusion of the serum.

*Interpretation:* In the type-specific mixtures of sputum and serum one finds the pneumococci surrounded by peripheral zones of characteristic appearance and distinct outline. This peripheral zone consists of a refractile substance which does not take the stain and which may be described as having a ground-glass appearance; the organism within it is stained blue. The size of this zone of *"quellung"* varies in different sputums with organisms of the same type; generally Type II pneumococci presented the larger zone.

The value of this method lies in its immediate interpretation of results, and the ease and simplicity with which it can be performed.

MAJOR S. WHITE, M.D.
Capt. Med. Corps, U. S. Army.

*The Military Surgeon, Feb., 1935.

[1]Sabin, A. B.: Immediate Typing of Pneumococcus from Sputum by Neufeld Reaction. *J.A.M.A.*, 100: 1584, May 20, 1933.

## Calciodoxyl Benzoate in Arthritis*

A SERIES of 282 cases of arthritis has been treated with calcium ortho-iodoxybenzoate. Of these, 46 had complete laboratory and x-ray studies.

Calciodoxyl benzoate is given, in addition to the standard treatment (removal of foci of infection; general hygiene; orthopedic appliances; local treatment; vaccines; salicylates; potassium iodide and thyroid extract; etc.), in doses of 2 Gm. daily (4 tablets of 7½ grains each). No real improvement need be expected for at least one month.

This drug is not related to cinchophen; does not cause addiction; rarely causes nausea (less than 3 percent); and produces subjective, as well objective, improvement.

After two years of treatment, 89 percent of the 46 fully-studied cases showed improvement recorded as "good to excellent," and only 6.7 percent were unimproved. Of the 236 cases incompletely studied, 50 percent showed improvement "marked to excellent"; 36 percent, "fair to good"; and 14 percent "slight to none." The general health improved, along with the local symptoms.

Calciodoxyl benzoate has a definite bactericidal action in the blood stream; stimulates leukocytosis and antibody formation; increases the permeability of membranes; increases lymph flow 400 percent; has a prompt and strong analgesic effect; and decreases

*Ann. Int. Med., June, 1934.

muscle spasm and swelling. It may also dilate the peripheral capillaries, as its effect in Buerger's disease and varicose ulcers is often striking.

THOMAS WHEELDON, M.D.
Richmond, Va.

## Etiology of Agranulocytosis*

IT seems that there is constantly increasing evidence that acute fulminant granulopenia, and probably the chronic types as well, are caused for the most part by the administration of easily oxidizable benzene-ring drugs. In the literature there have now accumulated reports of fifty cases in which these drugs are incriminated; notably amidopyrine, occassionally phenacetine and in one instance dinitrophenol. These drugs have been taken with and without barbiturates of various types. So it appears that barbiturates as a class have little or no effect in the production of the leukopenic state.

The evidence incriminating drugs in the production of this disease has become woven together in a strong chain of circumstantial evidence, based on the history of the disease and the coincidental introduction of most of these drugs; based also on statistical data which clearly show the prevalence of the disease among people of the medical group, obtained from a study of 1,314 deaths in this country in the past three years; based also on the prevalence of the disease in Germany and the United States, where these drugs have their widest use. We have been able to show that all of the cases of granulopenia under our observation have had drugs of this class prior to the clinical onset. Our studies in the oxidation reactions and the effect of oxidation products in animals indicate that quinone and perhaps catechol are the direct responsible agents in the production of this disease.

DRS. R. KRACKE and F. P. PARKER.
Emory University, Ga.

## Double Bowel Anastamosis
### (A Case Report)

FOLLOWING a thirty-six inch bowel resection of the terminal jejunum in mesenteric thrombosis, performed fifteen hours after the first sharp pain, I found that a careful end-to-end anastamosis apparently would not be sufficient, after healing and cicatricial contractions had occurred, so I hurriedly conceived the idea of a double anastamosis, to insure safe patency of the bowel lumen. The second procedure was a side-to-side lateral anastamosis, beginning one and one-half inches from the previous juncture and extending for the same distance down the bowel

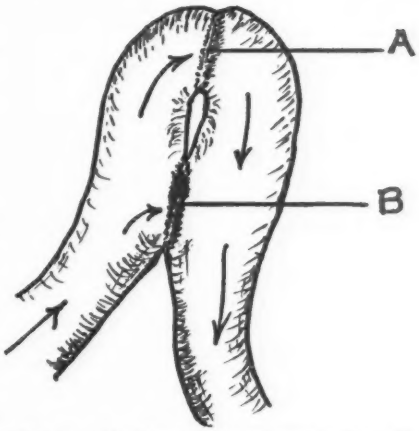



Fig. 1: (A) Primary end-to-end anastamosis: (B) Secondary lateral anastamosis.

wall. (See Fig. 1). A drain was placed to the lower angle, following the usual closure.

The customary diet restrictions were imposed, and were preceded by liquid albolene, supportive treatment with dextrose and saline solution, intravenously, and a few stimulants. These, combined with good nursing care, brought about complete recovery in a comparatively short time. Due to the combined anastamosis, there were no obstructive symptoms.

This technic requires little loss of time and gives more postoperative optimism for the surgeon.

RAY F. DONOVAN, M.D.
Watseka, Ill.

## Unsuspected Syphilis*

TO facilitate the detection of cases of unsuspected syphilis, we should prevent the concealment of the disease by syphilitic patients through educating society. The fact that more than 50 percent of these unfortunates are infected innocently should be taught. Society may then change its attitude toward those afflicted.

Among 313 whom I had the opportunity to treat in the New York Postgraduate Hospital, 45 percent denied ever having had any secondary eruption. This form of *syphilis anallergique tarda,* is often very hard to detect. Forty (40) percent of these patients did not know or suspect that they were suffering from syphilis. There are many obscure ailments, in the treatment of which unsuspected syphilis is discovered by a routine Wassermann test. Routine Wassermann tests of the blood of all patients should be made, no matter what the patient's complaints or denials may be.

*A. J. Clin. Path., Nov., 1934.

*Am. J. Syph. and Neurol., 18:311, July, 1934.

In cases in which a Wassermann reaction of the blood is negative and which are suggestive of syphilis, a provocative Wassermann test should be made. In all obscure medical cases in which the ordinary and provocative Wassermann tests of the blood are negative and where the physician may think there is a reasonable presumptive evidence of syphilis, a spinal fluid examination is indicated. There are cases of latent syphilis with negative blood and spinal serologic findings. This may be proved by the therapeutic test.

GIRSCH DAVID ASTRACHAN, M.D.
New York, N. Y.

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## Replacement of the Uterus Post Partum*

I HAVE found that, no matter how careful the technic employed in the delivery of the child and the expulsion of the placenta, the uterus, with its supports and adnexa, is still left in a state of distortion and on a level so low in the pelvis that it cannot always rise spontaneously out of it. Help on the part of the attendant is therefore indicated.

The fingers are placed above the symphysis and pressure exerted, at first in a direction downward and backward, then backward and upward, and, as the uterus rises and anteverts, it is thus sustained for a few minutes until it is firmly contracted. As a result of this procedure the uterus becomes and remains firmly contracted and is raised out of the pelvis to a relatively normal state of anteversion. The uterine supports and vagina are helped to regain their normal tonicity; and hemorrhage, subinvolution, prolapse and retroflexion are minimized or entirely obviated.

During and immediately after delivery of the placenta, the cervix is so low down in the vagina that, in multiparae, it can usually be seen at the introitus. While replacing the uterus, the vagina is drawn on the stretch—so much so that a perineum which is gaping as a result of previous labor will temporarily close. The fundus, at the end of twenty-four hours postpartum, will be found, usually, at or somewhat below the umbilicus, instead of two or three finger-breadths above this landmark.

For the same reason that the uterus contracts rapidly and enduringly when replaced, if this is done before the delivery of the placenta, it will facilitate its separation and diminish profuse bleeding. Bleeding of hemorrhagic proportions after delivery of the placenta, and regardless of the cause, has been successfully controlled, in the majority of cases, by the same maneuver, by simply maintaining the replaced uterus in an attitude of exaggerated elevation and anteversion for an additional few minutes.

LOUIS DROSIN, M.D.
New York City.

*A. J. of Surg., Nov., 1934.

## The Complete Treatment of Pernicious Anemia*

I HAVE adopted the plan of giving an intramuscular injection of a parenteral liver extract derived from 100 grams of liver, daily for two weeks. After this period a similar injection is administered weekly for three months and then every two or four weeks, as the individual patient requires. If the blood count is low at the beginning of treatment, the patient is started on a special diet for anemia and is encouraged to eat liver every day.

In the less serious cases, after improvement is well under way, the oral administration of liver or any potent liver substitute, in adequate amounts, may be substituted for the intramuscular injections. The diet should be continued permanently. The amount of liver substance to be taken by mouth is determined on the basis of the blood and chemical findings. In any event, it is most valuable to give an intramuscular injection of liver extract once a month for an indefinite period of time, in addition to the special diet and the oral therapy.

If the patient has a predominant or well-defined neurologic lesion at the beginning of the therapy, or shows signs of developing such a lesion, more intensive therapy is instituted. After the first week of treatment a liver substitute is given by mouth also, in adequate amounts, each day. Vitamin B is also added to the diet, as wheat germ, yeast or yeast extract. Intramuscular injections are continued indefinitely, at least twice a week. This plan of treatment is not fixed, however, but is varied in the light of the patient's needs, as determined by the volume index and the clinical course.

A complete blood study is made every week for the first two months; then monthly for the following four months; and at three-month intervals thereafter, if possible. No patient with pernicious anemia should go longer than three months without a careful blood examination, as a deficiency in treatment can be detected by careful studies of the blood long before symptoms or physical signs indicate an inadequacy. During the first weeks of treatment, reticulocyte counts are made daily.

By following this plan of intensive dietary, intramuscular and oral therapy, controlled by frequent complete blood studies, I have not seen a single patient whose blood could not

*A. J. Digest. Dis. and Nutrition. Nov., 1934.

be returned to normal and kept so, nor a single patient in whom neurologic symptoms developed during the course of intensive treatment.

RUSSELL L. HAYDEN, M.D.
Cleveland, Ohio.

## The Treatment of Gonorrhea in the Male*

IN the study of the treatment of 238 cases of gonorrhea, several points stand out:

1.—In the absence of local treatment to the anterior urethra, almost all patients have a posterior urethral involvement.

2.—If this treatment is not started before the fifth day of the disease, comparatively few escape infection of the posterior urethra.

3.—Most of the complications, with the exception of extension to the posterior urethra, are rather easily avoidable in all types of cases.

4.—The duration of the disease depends upon the speed of immunity establishment, the time at which treatment is started, the gentleness with which it is applied, and the patient's conduct.

5.—The duration of anteroposterior infection is from three to four times as long as is that of infection of the anterior urethra alone.

### Plan of Treatment

A.—Positive diagnosis made by Gram stain. (Methylene blue stain is never employed.)

B.—Patient impressed with fact that cure really is his job and the doctor only helps; that he must build up his own immunity to infection and cannot possibly do so if he indulges in alcohol or sexual excitement; advised to curtail physical activities, particularly to avoid long auto rides; allowed to eat as much as he wants of anything he wants, if there is no alcohol in it.

C.—Local treatment of the anterior infection at his first visit. This consists of a low-pressure irrigation of the anterior urethra only (meatus to the bulbomenbranous junction) with 1:8,000 potassium permanganate. This is allowed to drain from the urethra, after which not more than 6 cc. of silver nucleinate (commercial) is injected into the urethra. The glans is covered by a layer of cotton and the fluid held in for from 5 to 10 minutes, by means of a penis clamp. When this is allowed to escape, the penis is covered with a 1½- by 6-inch strip of absorbent cotton, held by two No. 10 rubber bands, to protect the clothing. He is instructed not to replace the rubber bands after his second urination.

D.—This treatment is continued once daily until there is no obvious discharge and the first glass of voided urine contains only a few shreds. Usually this is the condition at the end of 2 weeks; occasionally 3 weeks. After this, treatment is carried out on alternate days for 2 weeks; it is then given every third day for the next week. During the following week (6th) socalled "proofs of cure" are carried out, viz: A bulbar sound is passed to the bulbomembranous junction; a solid sound to same depth, with massage of the urethra upon it; and then alcohol is permitted. If the patient brings in no discharge on the slides given him for the purpose and the sediment of his first glass of urine shows neither pus nor gonococci, he is told that he is *probably* cured, but must not have coitus without a good condom for 2 or 3 months.

E.—Patients who cannot possibly make daily visits are given an individual treatment outfit—a syringe which holds only ⅛ ounce and some 0.5 percent protargol—and instructed how to use it. They use it twice a day in the early stage, except on days of office visits, and once a day later on. They urinate immediately before injecting and hold the solution in for 5 full minutes.

F.—If the infection goes into the posterior urethra, local treatment is stopped during the period of great activity and oral sedatives are prescribed. When bladder comfort has been entirely regained, low-pressure hydrostatic intravesical irrigations of 1:8,000 potassium permanganate are carried out every second or third day until the urine is clear except for some shreds. The very gentlest prostatic stroking is then started and, if this causes no increase in symptoms, it is repeated in from 3 to 4 days. When convinced that it is safe to do so, the prostatic pressure is gradually increased, but never to the point of causing real pain. This prostatic massage is continued twice a week until the prostatic secretion is free of pus. If this secretion does not show improvement by the end of 6 weeks of massage, the possibility that there has been a previous focal infective prostatitis is considered and the tonsils are searched and the teeth examined by roentgenograms.

### Notes

1.—No instrument of any type is passed into the urethra while it is thought that the gonococcus is present.

2.—As indulgence in alcohol or sexual excitement will render any treatment useless, there is never a let-up in efforts to hold the patient's cooperation, to the end that these things do not enter the picture.

3.—The closest watch is kept on the two-glass test and the patient is impressed with its importance, particularly with the fact that any derelictions upon his part will show in the urinary picture.

4.—As at least 75 percent of the complications are due to the patient's misconduct or treatment trauma, these are eliminated.

5.—Our "proofs" of cure are inferential things, based on our inability to produce evidences of present infection. At times we

*Ven. Dis. Information, Sept., 1934.

may err in judgment, but the patient will not infect others if he wears a condom for even the first few sexual contacts. If gonorrhea is present, these surely will stir it to activity.

P. E. Pelouze, M.D.

Philadelphia, Pa.

**Look for FACTS AND COMMENTS among the advertising pages at the back.**

## Arsphenamine and Mercury in Eczema

A NUMBER of years ago, a young woman, heavily painted, came into my office with the statement that she didn't mind if she had syphilis, because all the girls she knew who had been treated for that disease had marvelous complexions. This set me to thinking.

I was then treating a very stubborn case of eczema, in which there was no suspicion of syphilis, and decided to try intravenous injections of Novarsan (an arsphenamine preparation), alternated with intramuscular injections of mercury salicylate. The treatment worked! That was eight years ago, and there has been no recurrence.

This method may be unorthodox, but I am professionally alone and "300 miles from nowhere." Since that experience I have been having good success in treating various types of skin diseases along the same lines.

C. Peter MacLean, M.D.

Shelter Bay, P. Q., Can.

[Since arsenic is an old and tried remedy in various skin diseases, and is, like mercury, an excellent systemic tonic, Dr. MacLean's "unorthodox" method seems to be decidedly rational and worthy of more extended trial. It might be a worthwhile idea to try giving a combination of arsenic and bismuth (as in Bismarsen), intramuscularly, in some cases of eczema and other obstinate dermatoses, and report the results.—Ed.]

## Effects of Bile Salts on the Liver and on Peristalsis*

THE various stimulatory actions of bile salts, in the form of Taurocol, were studied in a series of 15 patients. In the first 5 cases it was definitely shown that this product exerts a well-defined stimulatory action on the bile-producing cells in the liver, in patients whose gallbladders had been removed. In all 5 cases there was an increase in the secretion of the bile, as measured by duodenal drainage. Because of the absence of the gallbladder, no B bile was present in the drainage.

In the second series of 5 patients it was conclusively shown that, under the influence of Taurocol, there was an increased flow of both A and B bile, in patients whose gallbladders were intact. Duodenal drainage and accurate measurement of the bile, before and after the administration of Taurocol, showed a definite increase in the flow of bile. In this series of cases and in the previous series it was also found that, after the administration of this medicament had been cut off, there was still an increased flow of bile, which persisted for some time.

In the last 5 cases it was shown that both gastric and intestinal peristalsis was increased under the influence of Taurocol. Gastric motility was found to be increased, as shown by meal tests. Intestinal peristalsis was found increased, as shown by the regular and more effective expulsion of the intestinal content.

Nathaniel Goldstein, M.D.

Brooklyn, N. Y.

*Med. Record, Feb. 20, 1935.

## Early Symptoms of Psychic Disorders*

SINCE it is usually the family physician who first sees the patient as he develops some symptom of nervous or mental disorder, it is essential that the general practitioner should be able to recognize and evaluate these early signs and symptoms.

Predisposing causes of these disorders, which may be of service in putting the physician on his guard, include such things as over-work in school or college, in business or in the home; trouble or anxiety; maladjustment to circumstances; bereavement; chronic toxemia; acute illness, especially such illnesses as influenza; pregnancy, puberty and the menopause.

Danger signals are: difficulty in concentration, irritability, restlessness, loss of memory, deterioration in capacity for work or achievement. Depression is an early sign that should never be neglected, as it may lead to pronounced melancholia and the development of a suicidal tendency. Toxemia and accompanying endocrine dysfunction always accompany or underly such depression. In these conditions, while prolonged treatment may be necessary, prognosis is hopeful.

The primary necessity is to relax and repose, preferably away from home or the accustomed environment. Medical and nursing care, with exhaustive investigation as to the possibility of some physical pathologic condition contributing to the mental condition, are necessary. Also bacteriologic, biochemic and radiologic investigations should be made.

Dr. Dorothea M. Tudor.

London, Eng.

*The Prescriber, Apr., 1934.

## Treatment of Functional Vomiting*

THE treatment of functional vomiting is relatively easy if the patient can be hospitalized, but countless pitfalls must be avoided.

Certain principles which apply to the treatment of the neurotic patient must be carefully observed. In other words, the patient must have confidence in his physician, should be under the care of one physician and not several, and should be separated as far as possible from the usual environment, including overzealous relatives and friends. Finally, if possible, the background for the development of the vomiting should be ascertained. This may be due to one of several types of psychic trauma, to nervous exhaustion or to some other apparently insignificant incident.

Psychotherapy is of tremendous importance in the treatment of these patients. The reassurance that goes with complete confidence of the patient in the ability of his physician to exclude organic disease and to gain eventual success by the treatment is the keystone of all therapeutic efforts in functional vomiting.

So far as the actual physical treatment is concerned this has consisted of complete rest of the stomach, and sedatives. In this manner the number of stimuli which reach the vomiting center is decreased. The psychic effect of taking no water or food by mouth is tremendous and is often a powerful club in the hands of the physician. Fluids are supplied by proctoclysis and intravenous injections of solutions containing salt and dextrose, to prevent thirst and ketosis. As a rule the patient soon tires of this treatment. Another weapon for the physician in overcoming the patient's resistance is to recommend complete rest in bed.

We have used sedatives in moderately large doses, in the form of pentobarbital by rectum, to reduce the general activity of the patient and also to reduce the irritability of the vomiting center and other centers.

After a period of from two to four days on such management, the patient usually tires of his predicament and becomes thirsty or hungry. It is beneficial to wait until the patient asks for food or water before supplying them. The small amounts of water may be given every hour or half-hour for a day or two. When food is supplied, it should be given in very small amounts and should be dry, solid food, such as toast, cereal and so forth, because such foods produce greater peristaltic action than do liquid foods and are more difficult to vomit. No fluids should be allowed until two hours after the ingestion of food, and then only in small amounts, such as 15 to 30 cc. at a time. If the patient retains food, the program for intravenous and rectal administration of fluid and sedatives can be gradually relaxed. The intake of food should be largely gaged by the desires of the patient. Whenever a patient suggests that vomiting may recur, she should be reminded that the previous program will be instituted again, and that the aspirations of the stomach, by tube, will be undertaken, to see just what is in the stomach. This will usually control the situation.

With the continuance of this program the patient will soon be eating well of a dry diet, with fluids after meals only. Reward for good behavior, and punishment for relapse, work splendidly in the management of these cases. Rehabilitation should be gradual. The physician must be firm and, if necessary, uncompromising. In some cases in which difficulty is encountered, additional aid may be had during the period of recovery from the use of insulin to stimulate the appetite, feeding by tube, elevation of the basal metabolic rate if it is low, and occasional gastric lavage.

C. H. DRENCKHAHN, M.D.
D. L. WILBUR, M.D.
Rochester, Minnesota.

*A. J. of Digestive Dis. and Nutrition, Nov., 1934.

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## Puerperal Septicemia in General Practice*

### (Case Reports)

IN view of the difficulty of treating puerperal septicemia and the high mortality rate commonly reported, the course of events in the following cases is not without interest.

The first case was a primipara, age twenty-two; normal labor; no tear of the perineum. On the fourth day, the temperature suddenly rose to 104°F., accompanied by a rigor. The lochia was normal. Edwenil, 2 cc., was given subcutaneously. Six hours later, the temperature was 103°F. and another 2 cc. injection was given. Next morning the temperature was 103°F.; pulse 128. A further 2 cc. were given morning and evening. On the ninth day (five days after the injections ceased) the temperature and pulse were normal, and there was an uninterrupted recovery. No local treatment of any kind was used.

The second case was rather unusual, in that the patient had no rise of temperature until 3 P.M. on the tenth day. She was a primipara, age thirty; normal labor; slight tear of the perineum, necessitating one suture, which was removed at 1 P.M. on the tenth day. Two hours later she commenced with a severe rigor, and temperature of 104.6°F. Four (4) cc. of Edwenil was given immediately, with a further 2 cc. six hours later. Next morning, her temperature was 103°F. Another 4 cc.

*Med. Press. & Circ. (Lond.), Dec. 26, 1934.

was given in the morning and 2 cc. in the evening. She then had some slight tenderness and fullness in the hypogastrium and a vaginal discharge of pus (not offensive). Glycerin was introduced into the uterus. Next day (the third of the illness) the temperature was 100°F. and she had a further 4 cc. of Edwenil. The following morning, the temperature was 98°F.; pulse 86. She had two further injections of 2 cc. each and made a good recovery.

Another case of equal interest was the following: I was called to the patient in the evening, and found the os the size of a shilling (25-cent piece) and the patient about three months' pregnant. The temperature was 105°F.; pulse 140. I suspected criminal abortion, although I could find no evidence. I gave her 4 cc. of Edwenil at once. During the night she aborted, and in the morning her temperature was 101°F.; pulse 140. She then had 2 cc. of Edwenil morning and evening. The following morning her temperature was normal. I gave two further injections during that day, and she made an uneventful recovery.

I realize that too-definite conclusions may not be drawn from three cases, but having in mind the nature of the cases, it occurs to me that such a response is worth recording.

CYRIL J. G. EXLEY, L.M.S.S.A.
Bardney, Lincoln, Eng.

Every day in every way CLINICAL MEDICINE AND SURGERY is getting better and better.—Dr. E. C. J., Iowa.

## Ovarian Transplantation*

TWENTY-NINE years ago I began to transplant ovarian tissue in cases where diseased ovaries and tubes had to be removed and where there were large varicose veins and extensive adhesions, which would undoubtedly reform, all of which would invite degeneration.

Ovarian transplantation is performed:

1.—To furnish the body the necessary support of the ovarian secretion and to activate any small portion of the ovary that may be left in place, but which is insufficient to withstand the demands upon it and would early atrophy and disappear.

2.—To prevent the distressing symptoms of loss of mental and nervous stability resulting from sudden, artificial menopause after panhysterectomy, or even following the natural climacteric, for the ovaries continue to lend some support for many years thereafter.

3.—To promote the possibility of pregnancy.

In transplanting the ovarian gland for therapeutic purposes, it is my usual custom to insert the graft in a pocket behind the rectus muscle, and fasten it in place on the deep epigastric artery and veins in close proximity to the lymphatic radicals, where it is least likely to be traumatized. These patients usually do not have external evidence of menstruation, but periodically each month, they may have the systemic sensation that often accompanies the catamenia, with tenderness and swelling at the site of the graft. I have had gratifying results in the majority of my patients.

WILLIAM SEAMAN BAINBRIDGE, M.D.
New York City.

*Med. Rec., October 3, 1934.

## Carbohydrates in Diabetes*

TODAY more carbohydrate is used in the diabetic diet than ever before. This has come about in various ways and is now the rule in most clinics. The average 1933 diet of the diabetic clinic at the University of Pennsylvania Hospital was: Protein 65; fat 80; and carbohydrate 100 Gm.

The characteristics of a higher carbohydrate diet are as follows:

1.—It is a strictly measured diet.
2.—It approaches the normal balanced diet.
3.—The caloric value is low.
4.—The fat content is low.

It has developed since the discovery of insulin and is closely related to the use of insulin.

The advantages of a higher carbohydrate diet are as follows:

1.—It approaches the normal diet.
2.—It is more palatable, and therefore is more easily followed.
3.—It permits more economical types of food.
4.—A "general well-being" of patients is reported by all using it.
5.—It improves the efficiency of insulin.
6.—It perhaps keeps one better informed of the patient's tolerance.
7.—The vitamin and mineral content are adequate.
8.—It reduces obesity without acidosis.
9.—It promotes the maintenance of a normal blood cholesterol.
10.—The low fat content is suitable for cases with gall-bladder disease.

This diet lends itself to the adjustment needed for fever, infection, peptic ulcer, etc.

FRANCES D. W. LUKENS, M.D.
Philadelphia, Pa.

*Penna. M. J., September, 1934.

# DIAGNOSTIC POINTERS

## Sudden Death and Syphilis

IT has been reported that approximately 10 percent of patients with cardiovascular syphilis die a cardiac death.

In 33 cases of sudden death, studied postmortem, 6 showed syphilitic aortitis with coronary orifice constriction; 4 showed syphilitic aortitis with aneurism.

Cardiac syphilis means a syphilitic aortitis, which is usually confined to the arch of the aorta.—DR. A. L. BRISKMAN, in *Am. J. Syph.*, Oct., 1932.

## Tumors of the Pancreas

TUMORS of the pancreas push forward from the depths of the epigastric and upper part of the umbilical areas, and present themselves as deeply-seated, vaguely-felt masses on palpation. They are best made out by examination under an anesthetic, move little on respiration, and often transmit a non-expansile pulsation.—"Medical Aphorisms," in *Radiological Review*, Jan., 1935.

## Pregnancy Toxemia

IT is common knowledge that the rigorous application of antenatal study has largely overcome all forms of pregnancy toxemia in institutional practice. More than 75 percent, if not nearly all, of the cases can be avoided. —DR. P. BROOKE BLAND, of Philadelphia, in *J. A. M. A.*, Dec. 3, 1932.

## Night Blindness

NYCTALOPIA may, in some cases, be due to a deficiency of vitamin A in the patient's diet.—*The Doctor*, July, 1934.

## Backache

PAIN in the back may be referred from distant organs or be the result of diseased or misplaced contiguous organs. Both must be differentiated from backache arising from disease of the vertebral column itself.

In backache due to disease or displacement of distant organs, the pain is usually localized (when the pathologic condition is in the aorta, heart or lungs) in the upper portion of the spine, between or above the scapulae. Stomach, gall-bladder, etc. conditions give rise to pain in the dorsal region; a retroverted uterus or a bladder condition may cause a lower-lumbar pain.

Diseases of the mediastinum and inflammations of the pleura may cause upper dorsal and cervical pain. In the lower portion of the spine, kidney, pancreatic, prostatic and seminal vesicle disease can be factors.—DR. P. KRUESCHER, in *Bull. Amer. Hosp., Chicago*, Nov., 1932.

## Examining Urinary Shreds

EXAMINATION of smears made from shreds in the urine, for the determination of the cure of gonorrhea, yields better results than the more common method of using smears from the urethral discharge or prostatic secretion. The gonococci are more free than other confusing bacteria.—DR. EARL E. EWERT, in *Chicago M.S. Bul.*, Dec. 30, 1933.

## Ophthalmoscopic Signs in the Preapoplectic Stage

DISEASE of the retinal vessels, not of local origin, is not an absolute criterion of disease of the cerebral vessels; it simply furnishes a presumption in favor of its existence. But, in the presence of a retinal arteriosclerosis not of local origin, we are justified in concluding that a coexisting lesion is probably present in the cerebral vessels; also that we are frequently able to diganose ophthalmoscopically a retinovascular disease which is an important sign of cerebral arteriosclerosis, this being a direct menace to the patient's life.—DR. M. COHEN, of New York, in *M. J. & Record*, Aug. 17, 1932.

## Endocrines and the Skin

EVERY cell of the body is influenced by the internal secretions. Since the skin, which should not be regarded merely as a covering to the body, is an important organ coordinating with other organs, it is evident that the relation of the endocrines to the dermatoses must be one of importance. The skin reacts to the endocrines directly, through the blood stream, or indirectly, by way of the nervous system. Many cases of cutaneous disease have been influenced by organotherapy; yet great caution must be exercised in approaching the conclusion that a definite cutaneous condition is produced by a disorder of the en-

docrine glands. However, application of our present-day knowledge resulting from actual clinical observation, combined with accepted scientific facts, warrants the acceptance of certain procedures and conclusions.

The skin changes that occur with dysfunctions of the internal secretory glands, manifest themselves in texture, color, pigmentation, hair growth and the formation of growths.—Dr. Oscar L. Levin, in *M. J. & Rec.*, Dec., 1933.

## Blood Pressure and Psychoses

MANY patients suffering from high blood pressure cannot give up their work, though frequently they are acutely conscious of diminishing power of concentration and of loss of memory. Too often these patients have no interests outside their work and, when induced or compelled to retire, their depression deepens and a definite psychosis ensues. The patient with chronic hypotension is different. Lack of exercise renders him obese and flabby; he becomes lethargic, introspective and often hypochondriacal.—Dr. C. W. J. Brasher, in *Practitioner* (Lond.), Dec., 1932.

## Activity of Tuberculosis

ELASTIC fibers, when found in the sputum of a tuberculous patient, always indicate activity. Cavities are all too frequently silent, from the standpoint of physical signs.—Dr. William H. Ordway, in *New Eng. J. of M.*, Aug. 9, 1934.

## Stillbirths

NECROPSIES, performed on 338 stillborn fetuses, showed that nearly 30 percent of the deaths were due to birth traumatism. There was no other apparent cause than prematurity in nearly 16 percent. Only about 4 percent of the deaths were due to maternal toxemia.—Dr. Jas. B. Gillespie in *Am. J. Dis. Child.*, July, 1932.

## The Climacteric

THE climacteric is not merely a syndrome of genital insufficiency, but the biologic consequence of a complex and constant endocrine crisis, the nucleus of which is the genital subsidence, but in the development of which all activities participate. All these general characteristics of the climacteric period are the reflections of a parallel state of functional irritability in the ovary, thyroid, suprarenals and other ductless glands, which are the fundamental glandular elements entering into this crisis.—Dr. Ethel M. Hite, in *N. E. M. A. Quarterly*, June, 1934.

## Incidence of Syphilis

IN 2,872 private practice physical examinations, 105 (3.65 percent) patients gave a straight 4-plus Wassermann reaction; 66 were males. Thirty-five (35) of the 105 presented a definite clinical picture of secondary, tertiary or latent syphilis. None of these patients came primarily because of known syphilis; none had primary lesions at the time of examination; and only 2 had secondary manifestations.—Drs. E. F. Kiser and C. B. Bohner in *J. A. M. A.*, May 7, 1932.

## The Thymus and Pineal Glands

EXTRACTS of the thymus produce a surprising increase in early maturity and body growth in white rats. This is more marked when the treatment is continued for several generations.

Pineal extracts cause slow body growth (dwarfs), with precocious sexual maturity. —Dr. Leonard G. Rowntree, Philadelphia, Pa.

## Mental Deficiency and Sex

THERE is a popular idea that mentally deficient persons have an unduly strong sex appetite and are more prone to sex aberrations than are those with normal intelligence. There is little, if any, real evidence for this opinion. Mental defectives have less than the normal control over their *behavior*, so that their sex deviations are more likely to be discovered, but the lower the intelligence quotient, the less vigorous are the sex emotions.—Dr. Lionel S. Penrose, in "Mental Defect" (Farrar and Rinehart), 1934.

## The Importance of the Lymphatic Constitution in Surgery

A COMPLETE physical examination of patients before operations should include examination of lymph follicles of the tongue; lymphocytosis should also attract attention. Positive findings suggest a further search for stigmata of lymphatic constitution. If such are found, a roentgenogram of the region of the thymus gland should be made. If a persistent or hyperplastic thymus is present, it should be irradiated before any surgical procedure. Thymic hyperplasia, with or without objective symptoms, is potentially dangerous to life. If patients with status thymico-lymphaticus are operated upon, special care must be taken to avoid traumatism; tissues should be handled gently in order to avoid the formation of adhesions. This applies chiefly to laparotomies and operations on joints.—Dr. Jos. K. Narat, in *Am. J. Surg.*, Oct., 1932.

# NEW BOOKS

Any book reviewed in these columns will be procured for our readers if the order, addressed to CLINICAL MEDICINE AND SURGERY, Medical & Dental Arts Bldg., Waukegan, Ill., is accompanied by a check for the published price of the book.

*To be fond of learning is to be near to knowledge.*—CONFUCIUS.

## DeLee: Obstetrics

THE PRINCIPLES AND PRACTICE OF OBSTETRICS. *By Joseph B. DeLee, A.M., M.D., Professor of Obstetrics and Gynecology at the University of Chicago; Chief of Obstetrics, Chicago Lying-in Hospital and the Dispensary; Consulting Obstetrician to Provident Hospital, to the Chicago Maternity Center, etc. With 1,221 Illustrations on 923 Figures, 265 of Them in Colors. Philadelphia: W. B. Saunders Company. 1934. Price, $12.00.*

This is the sixth edition of this most complete and comprehensive work on obstetrics. Much new material has been added and some of the chapters have been rewritten. The bibliography has been thoroughly revised and brought up to date.

This work should continue to supply the needs of the student, as it has since 1913, and to be, for the general practitioner, an ever present help in time of trouble and a source of information on all aspects of midwifery.

## Turner: Surgery

MODERN OPERATIVE SURGERY. *Edited by G. G. Turner, M.S., F.R.C.S., Eng., F.A.C.S. (Hon.). Two volumes. Baltimore: William Wood & Company. 1934. Price, $16.00.*

This is another of those very complete and comprehensive systems of surgery for which the British seem to have developed a penchant recently.

Careful editing has kept the articles of the twenty-seven authors from overlapping.

Operative technic is described in the greatest detail, and for this reason the work will have its greatest appeal to the surgeon, rather than to the general practitioner or student.

## Richmond: Sex Education

AN INTRODUCTION TO SEX EDUCATION. *By Winifred V. Richmond, Ph.D., Author of "The Adolescent Girl," "The Adolescent Boy," etc. Farrar & Rinehart Inc., New York. 1934. Price, $2.50.*

The author of this interesting volume frankly admits that as yet the science of sex and the effect that sex has upon society is not wholly understood. However she has assembled the known knowledge on the subject and presented it in a very effectual manner in this book which should prove of interest to those persons interested in the problems of the individual and society, as it contains a wealth of information on sex and its allied topics.

Starting with the accepted hypothesis of life reproduction, the writer follows logically the evolution of sex and the reproduction activities from the lower forms of life to the higher animals, ending with a description of the human reproductive organs and their functions. The sex urges, activities and attitudes of man as recorded in history, and these situations as they exist today in the primitive societies of our outlying countries are explained and, together with the physical factors of sex, are shown to be the foundation for our attitude toward sex at the present time. The different stages of sex growth, from infancy to old age, in the male and the female of the human race, are discussed and it is demonstrated that many of our mental cases are the result of stunted or dwarfed sex development. The problems of sex, including such topics as, marriage and its complications, birth control, eugenics, prostitution, homosexuality and disease, are dealt with. In conclusion, a discussion on sex education, how it should be taught, by whom, where, and during what stage of life, is presented as one of the major problems yet to be solved.

J. R. C.

## Dimmitt: Laboratory Methods

MANUAL OF CLINICAL LABORATORY METHODS. *By Pauline S. Dimmitt, Ph.G., Medical Technologist for the Stout Clinic, Sherman, Texas. Former Instructor in Biological Chemistry, University of Texas School of Medicine; and Medical Technologist in the Pathological Laboratory, John Sealy Hospital, Galveston, Texas. Illustrated with 36 engravings, including seven full-page color plates. Philadelphia: F. A. Davis Company. 1934. Price, $2.00.*

This laboratory manual will appeal to the general practitioner because of its simplicity. Instead of describing many tests in any given determination, the one giving the most favorable compromise between the time expended and the maximum accuracy obtainable is given.

The work is thoroughly up-to-date and uses the newer classification and nomenclature in describing the differential leukocyte count. It includes several recently-described tests, such as the Eagle flocculation test for syphilis and Freidman's modification of the Aschheim-Zondek test for pregnancy.

The undergraduate student will find it rather incomplete, but it will serve well for the busy clinician who does his own laboratory work.

## Landon, Smith and Hough: Poliomyelitis

POLIOMYELITIS. A Handbook for Physicians and Medical Students. Based on a Study of the 1931 Epidemic in New York City. *By John F. Landon, M.D., Attending Physician, Willard Parker Hospital, New York, N. Y.; Special Consultant in Pediatrics, Woman's Hospital, New York, N. Y., etc.; and Lawrence W. Smith, M.D., Pathologist, Willard Parker Hospital, New York, N. Y.; Formerly Associate Professor of Pathology, Cornell Medical College; etc. With a section on the orthopedic after care of the disease by Garry De N. Hough, Jr., M.D., F.A.C.S., F.A.A.O.S., Attending Orthopedic Surgeon, Shriners' Hospital for Crippled Children, Springfield, Mass. New York: The Macmillan Company. 1934. Price, $3.00.*

All phases of this still obscure subject are presented in a brief and concise form, so as to enable the physician to obtain a practical working knowledge of the disease in a short time. Controversial subjects, such as convalescent serum therapy and respirator treatment, are critically analyzed. Considerable material from the author's own experience in the 1931 epidemic in New York is included, with a number of illustrative case reports. The pathologic and orthopedic portions are profusely illustrated.

## Kretschmer: Psychology

A TEXT-BOOK OF MEDICAL PSYCHOLOGY. *By Ernst Kretschmer, Dr. Med., Professor of Neurology and Psychiatry in the University of Marburg; Medical Director of the Marburg University Nerve Clinic. Translated with introduction by E. B. Strauss, M.A., D.M. (Oxon.), M.R.C.P. Assistant Physician to the Cassel Hospital for Functional Nervous Disorders; Hon. Typological Psychiatrist to Besford Court Mental Welfare Hospital; Research Assistant in the Department of Psychiatry, Hospital for Epilepsy and Paralysis, Maida Vale. London: Oxford University Press, Humphrey Milford. 1934. Price, $5.00.*

This work is not in any sense a new "school." It is a compendium of empiric facts derived from anatomy, physiology, neurology, biochemistry, psychiatry and psycho-analysis, and many other sources, systematically arranged in such a way as to throw a great deal of light on the problems of human thought, feeling and conduct, in health and disease.

Dr. Kretschmer emphasizes those phases of medical psychology which are of the greatest practical importance to the physician, such as the psychology of neurosis, psychopathy, hysteria and the milder borderline conditions associated with schizophrenia and paranoia.

This book may well be employed by the general practitioner, as well as the psychiatrist.

## Old Age

OLD AGE, MEDICALLY CONSIDERED. *A Series of Papers by Medical Authorities on the Physical and Dietetic Treatment of Diseases and Disabilities of Old Age. With a Foreword by R. King Brown, B.A., M.D., D.P.H. Reprinted from the British Journal of Physical Medicine. London: The Actinic Press, Ltd. 1934. Price, 3/-net.*

In this small, paper-bound volume are collected twelve monographs on various phases of senility. Appropriate diets are described. Senile involvement of the teeth, eyes, skin, kidneys, heart and lungs are discussed. There are many excellent suggestions regarding exercises and recreations in old age.

## Goldthwait and Others: Body Mechanics

BODY MECHANICS IN THE STUDY AND TREATMENT OF DISEASE. *By Joel E. Goldthwait, M.D., LL.D. Member of Board of Consultants, Massachusetts General Hospital; Ex-President of the American Orthopedic Association; Organizer and First Chief of Orthopedic Service, Massachusetts General Hospital. Lloyd T. Brown, M.D., Instructor in Orthopedic Surgery, Harvard Medical School. Loring T. Swaim, M.D., Instructor in Orthopedic Surgery, Harvard Medical School. John G. Kuhns, M.D., Assistant in Orthopedic Surgery, Harvard Medical School. Philadelphia: J. B. Lippincott Company. 1934. Price, $5.00.*

The authors first discuss the various body types and the general body mechanics. They then direct attention to the many chronic diseases which they consider, at least in part, due to defective body mechanics. Various abnormalities are considered under such broad headings as "backache," "arthritis," "diseases of the abdominal viscera," and so on.

Treatment is directed at the correction of defective body mechanics by education of the patient as to correct posture, properly planned exercises and the use of pads and braces.

The general practitioner will find in this work many answers to the question as to what to do for the chronic valetudinarian.

## Bluemel: Stammering

STAMMERING AND ALLIED DISORDERS. *By C. S. Bluemel, M.A., M.D., F.A.C.P., M.R.C.S. (Eng.). New York: The Macmillan Co. 1935. Price, $2.00.*

This book presents clearly a theory of stammering which may give a broader conception of the subject. The author not only explains his own theory in an interesting and

constructive manner, but contrasts and harmonizes it with the most widely used theories and practices in the science today. The last chapter is devoted to helpful suggestions for the treatment of stammering.

## International Clinics

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and Other Topics of Interest. *By Leading Members of the Medical Profession throughout the World. Edited by Louis Hamman, M.D., Visiting Physician, Johns Hopkins Hospital, Baltimore, Md. Volume IV, Forty-Fourth Series, 1934, and Volume I, Forty-Fifth Series, 1935. Philadelphia, Montreal and London: J. B. Lippincott Company. Price, $3.00 each.*

These two excellent volumes come up to the high standard set by previous issues, and offer to the busy physician, who feels unable to go away for graduate study, a really worthwhile substitute for such instruction.

Among the highly practical articles presented in the volume for December, 1934, are discussions of The Influence of Emotions in the Psychoneuroses; The Clinical Aspects of Vitamin B; Artificial Pneumothorax in Pneumonia; Fractures of the Femur in Children; The Modern Concept of Sterility; and eleven others.

The volume for March, 1935, contains: Ketosis and the Ketogenic Diet; Insomnia; Syphilis of the Stomach; Calcium and Disease; Postoperative Pulmonary Embolism; and twelve other articles.

Both volumes contain frontispieces in color and a number of instructive plates and text illustrations.

For those who are interested in active participation in actual graduate studies, there is a real thrill in working over the splendid clinical problems from the Pittsburgh Diagnostic Clinic (two of which are inclosed in each volume) and in making use of the cooperation which that excellent institution is prepared to give in their solution.

There are few books from which an active clinician can derive as much actual instruction, at anything approaching their small price, as he can get from a careful study of these volumes of "International Clinics."

## Jacobson: Relaxation

YOU MUST RELAX. A Practical Method of Reducing the Strains of Modern Living. *By Edmund Jacobson, M.D. New York and London: McGraw-Hill Book Company, Inc., Whittlesey House. 1934. Price, $1.50.*

Some years ago, the author of this volume published another one on the same subject, but intended for physicians ("Progressive Relaxation." University of Chicago Press. 1929). This one is meant for laymen, to assist them in cooperating with the physicians who are teaching them to relax; but for such a purpose it does not seem wholly suitable, as it contains more technical material than the average patient can assimilate, and enough clinical histories to light up a number of active cases of hypochondriasis. This technic must be taught by personal instruction, and it will be much better for the physicians to study these pages, and then tell each patient as much as he thinks that patient ought to know.

The thesis is that, without a definite method for conscious relaxation, very few people in socalled civilized countries ever relax at all fully; and that more or less obvious tenseness or strain of voluntary muscles is at the basis of most cases of pathologic worry, nervous disorders and insomnia. The methods for the cultivation of progressive relaxation are given in detail.

Physicians who have the author's earlier book will not need this one. Those who do not have it will find in this volume practically all the essential material contained in the earlier one, at a much lower price, and will do well to purchase it without delay, study it carefully, and put its ideas into intelligent practice. By so doing they may be able to relieve a number of patients who have been nothing but a source of dissatisfaction heretofore.

## Roerich Pact

THE ROERICH PACT AND THE BANNER OF PEACE. *Proceedings, Third International Convention for The Roerich Pact and the Banner of Peace, November 17th and 18th, 1933, Washington, D. C. Volume II. New York: Roerich Museum Press. 1934.*

The Roerich "Banner of Peace," for the protection of schools, churches, libraries, museums and other cultural institutions in time of war, as the Red Cross flag protects hospitals, has been mentioned in these columns previously.

This paper-bound report of the proceedings of the International Convention of 1933 should be interesting to those who are following this laudable effort.

## Evans: Primary Erotology

SEX PRACTICE IN MARRIAGE. *By C. B. S. Evans, M.D., F.A.M.A. Introduction by Rudolph W. Holmes, M.D., F.A.C.S., Chicago. Prefatory and Other Notes by Norman Haire, Ch.M., M.B., London, England. With illustrative diagrams based on actual measurements of normal human beings by Robert L. Dickinson, M.D., F.A.C.S., New York City. New York: Emerson Books, Inc. 1935. Price, $1.95.*

This well-made little book, which can be read in an hour, is a simple and elementary introduction to the art of love, especially adapted to the needs of those who have made no study of the subject whatever and might, because of faulty education resulting in inhibitions, be repelled by the more elaborate and

detailed treatises. It should serve such a purpose very well indeed, as the advice and suggestions given are, as far as they go, sound and helpful, with the single exception that the author has not adopted the now-generally-accepted fact that the period of highest fertility in women is the three or four days before and after the mid-menstrual day. For those wholly uninformed regarding anatomy, the line drawings in the appendix will be instructive.

This is a book which physicians may safely and profitably recommend or prescribe for their patients and friends, if they will take care to correct the error (on page 28) regarding the fertile period.

## Livingston: Visceral Neurology

THE CLINICAL ASPECTS OF VISCERAL NEUROLOGY. *With Special Reference to the Surgery of the Sympathetic Nervous System. By W. K. Livingston, M.D. Clinical Associate in Surgery, University of Oregon Medical School. Springfield, Illinois: Charles C. Thomas. 1935. Price, $5.00.*

This book is primarily devoted to a clinical consideration of certain diseases for which sympathectomy has been advocated. The methods by which such cases may be studied before operation are described, and the anatomy and physiology of the visceral nervous system is briefly reviewed. The text is illustrated by 46 drawings and skin temperature charts, and by three plates in color.

The author's conclusions are based upon his clinical experience with some three hundred cases, which he observed before and after operation, together with a thorough study of the literature.

## Logie: Nomenclature of Disease

STANDARD CLASSIFIED NOMENCLATURE OF DISEASE. *Compiled by The National Conference on Nomenclature of Disease. Edited by H. B. Logie, M.D., C.M., Executive Secretary. New York: The Commonwealth Fund. 1935. Price, $3.50.*

If medicine is to make progress as a science, a uniform system of recording disease processes must come into general use, especially in hospitals and clinics where elaborate records are kept for purposes of study.

This Standard Nomenclature has been approved by 27 national medical societies and adopted by 500 hospitals, so it seems fair to assume that it will presently be the method of classification universally employed. The index includes more than 15,000 items. The basis of the diagnosis is clinical.

No hospital, clinic or institution for the care of the sick, however small, which aspires to be considered satisfactorily up-to-date, can afford to be without at least one copy of this handy and well-made book; and all physicians who desire to practice on the highest scientific plane and who keep records which are at all adequate will want a copy, so that they may be familiar with the best current ideas in this line, even if they do not use the system in its entirety.

## Breitigam: Living

DARE TO LIVE. *By Gerald Breitigam, Feature Editor, The New York World-Telegram. New York: Falcon Press, Inc. 1934. Price, $2.00.*

A good many books have appeared of late, purporting to teach people how to live more fully and satisfyingly. Some of these advance new and helpful ideas; some are superbly well written; some are deplorable. This book occupies a middle ground. There are few, if any, new ideas in it; the style of writing is clear, but not distinguished; the method of presentation is logical, but not fascinating; most of the best bits are quoted from other authors, but at least one fine statement appears to be the author's own:

"A man may *own* without *possessing* . . . *Possession* involves understanding and appreciation and may, or may not, involve *ownership* . . . Hence, *ownership* becomes the measure of financial power, while *possession* measures the capacity of enjoyment."

Those who have several books dealing with the art and science of living will not need this one. Those who have read little along this line may well find the partially-digested pabulum in this volume exactly suited to their needs and very helpful in the business of getting the most out of their days—though the "daring," suggested in the title is somewhat conspicuous by its absence.

## Dressler: Clinical Electrocardiography

KLINISCHE ELEKTROKARDIOGRAPHIE MIT EINEM GRUNDRISS DER ARHYTHMIEN (Clinical Electrocardiography with the Elements of the Arrhythmias). *By Dr. Wilhelm Dressler, Assistant at the "Heart Station" in Vienna. Third improved edition. Illustrations. Berlin and Vienna: Urban and Schwarzenberg. 1934. Price, geh R. M. 12—geb R. M. 13.50.*

This manual has been prepared for students and practitioners who desire to familiarize themselves with electrocardiography as a diagnostic aid. The author has been modest in his announcement of its scope, because the work presents, not only the basic or physiologic aspects of electrocardiography, but covers the entire domain of this procedure, diagnostically and prognostically. The text is richly illustrated by well-executed electrocardiograms and there is a tabulated analysis of their prognostic significance.

Dr. Dressler has made several original observations, so that those who are interested in the subject and can read medical German will find this manual, not only technically instructive, but also of interest for comparison with our own concepts of the applicability of electrocardiography.

G. M. B.

# MEDICAL NEWS

(c) Harris & Ewing.

## Dr. Martin Passes

ONE of the most outstanding and picturesque figures in American medicine was withdrawn from the scene of his many and varied activities, with the passing, on Mar. 7, 1935, of Dr. Franklin H. Martin, of Chicago, he being 77 years old. His remarkable career came to an end at Phoenix, Ariz., as a result of heart disease.

Among scores of achievements, any one of which would have made a man's life worth while, Dr. Martin will probably be longest remembered as the founder of the American College of Surgeons and of its official organ, *Surgery, Gynecology and Obstetrics.*

A brief biographic sketch of Dr. Martin was published in CLINICAL MEDICINE AND SURGERY for December, 1929 (p. 861). His two-volume autobiography, "The Joy of Living," is a classic of its kind; and, for wider distribution, he embodied the essence of his experience and philosophy in a briefer sketch, "Fifty Years of Medicine and Surgery." Either of these will make fascinating reading for any physician.

While the dynamic personality of Dr. Martin will be sorely missed, he had the wisdom to train others to carry on the activities which he inaugurated, but the memory of his life and work will always be an inspiration.

## Opening in South Dakota

THERE is a promising opening for a good, active young or middle-aged physician in South Dakota, 12 miles from the nearest town. It is believed that such a man could soon build up a good practice.

If interested, write to Mr. F. B. Kargleder, White Rock Drug Co., White Rock, So. Dak.

## Civil Service Examination

THE United States Civil Service Commission has announced an open competitive examination as follows:

*Junior Graduate Nurse*

Applications for the position of junior graduate nurse must be on file with the U. S. Civil Service Commission at Washington, D. C., not later than April 15, 1935. The entrance salary is $1,620 a year, subject to deductions.

Full information may be obtained from the Secretary of the United States Civil Service Board of Examiners at the post office or customhouse in any city which has a post office of the first or the second class, or from the United States Civil Service Commission, Washington, D. C.

## Postgraduate Courses in Berlin

INTERNATIONAL postgraduate courses in medicine and surgery are being held at the Kaiserin Friedrich House, the medical center of Berlin, Germany. From April 29 to May 4, special courses for surgeons will be given. Those who are interested can obtain full particulars from the German Tourist Information Office, 665 Fifth Ave., New York City.

## Medico-Military Training

A COURSE of inactive duty (no pay or allowances) training will be held at the University of Michigan, Ann Arbor, Mich., Apr. 14 to 20, inclusive, 1935. The mornings will be devoted to instruction in medicine, dentistry or surgery, at the University Clinics, and the afternoons and evenings to military instruction. Credit of 49 hours will be given to all attendants.

Medical and dental reserve officers who desire to take this course should write, *at once*, to the Commander, Illinois Reserve District, Room 905, Chicago Post Office Building, Chicago, Illinois.

(c) Keystone View Co.

## A Hospital Goes Modernistic

REPORTS from Europe announce that Paris, France, will soon have the most up-to-date hospital in the world, as well as one of the largest.

If the new Beaujon Hospital is provided with interior arrangements as modern as its facade (shown above) is modernistic, it ought to be worth going a good way to see, when it is in full operation, as it will be shortly.

## Our Population Grows

THE Bureau of the Census recently reported that the population of the United States, at the moment the report was finished, was 125,550,076—but the next minute it was something else.

There is one birth in the country every 14 seconds; one death every 23 seconds; one immigrant every 14 minutes; one emigrant every 5 minutes; making a net gain of one person every 37 seconds.

It is only a matter of simple arithmetic to figure where our population will be one year or a century from now, *if this same trend continues.—Patchwork.*

## Pan American Medical Association

THE sixth scientific congress of the Pan American Medical Association will be a "floating congress," aboard the S. S. "Columbia," on a trip to Brazil, leaving New York July 18 and returning Aug. 28—41 days at sea. The itinerary includes Havana, Curacao, Trinidad, Santo Domingo and Jamaica, in the West Indies, and Rio de Janeiro, Santos and Sao Paulo, in Brazil. Sessions will be held ashore in the Brazilian cities. Inclusive fees for the entire cruise range from $450 to $1,750.

For full particulars, write to Dr. Joseph J. Eller, Director Gen., 745 Fifth Ave., New York, N. Y.

## Educational Literature

EVERY physician should be educating the public as to the importance and harmlessness of immunization of all children against diphtheria.

In order to make this easier, the National Drug Company, 5109 Germantown Ave., Philadelphia, has prepared a leaflet on this subject, written for laymen and containing no reference to the Company, which they will supply to physicians, without charge and in any desired quantities, on request. A card, carrying the same copy and suitable for display on the wall of the waiting room, will also be furnished, if desired.

## Neisserian Medical Society

THE American Neisserian Medical Society was founded June 12, 1934, for the promotion of knowledge in regard to the gonococcus and gonococcal infections.

An invitation to become members is extended to all physicians in the United States and its territories, Canada and Mexico, who are graduates of recognized medical schools and who are engaged in some phase of the management of gonorrhea.

For full particulars, write to Dr. Oscar F. Cox, Jr., Secty., 475 Commonwealth Ave., Boston, Mass.

## School of Tuberculosis and Silicosis

THE twenty-first session of the Trudeau School of Tuberculosis will be held at the Trudeau Sanatorium, Trudeau, N. Y., May 13 to June 8, 1935. The third week, beginning June 3, will be a symposium on silicosis. There will be a supplementary course, June 10 to 22, inclusive, at Bellevue Hospital, New York City. The three parts of the course may be taken separately.

Those who are interested may obtain full particulars from the Secretary of the School, Saranac Lake, N. Y.

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TO ASSIST doctors in obtaining current literature published by manufacturers of equipment, pharmaceuticals, physicians' supplies, foods, etc., CLINICAL MEDICINE AND SURGERY, Waukegan, Ill., will gladly forward requests for such catalogs, booklets, reprints, etc., as are listed from month to month in this department. Some of the material now available in printed form is shown below, each piece being given a key number. For convenience in ordering, our readers may use these numbers and simply send requests to this magazine. Our aim is to recommend only current literature which meets the standards of this journal as to reliability and adaptability for physician's use.

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F-612 Taurocol. The Paul Plessner Co.

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F-636 Science's latest contribution to female sex hormone therapy — Progynon. Schering Corporation.

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